

# PROCESSOR

Products, News & Information Data Centers Can Trust. Since 1979

## Picking A New Data Center Space

### Consider Many Factors When Opting For A Fresh Location

by Elizabeth Millard

ALTHOUGH SOME SMALL to midsized enterprises were fortunate enough to get ample data center space from the company's founding, most have discovered that as equipment and data needs grow, so too does the demand for a new data center. As in all real estate, location is important because the drive from the company's main offices to the data center shouldn't eat up the majority of an IT staff's working hours. But beyond establishing a radius for the search, there are also a number of other factors that should be uppermost in a data center manager's mind during the process.

#### Power, Heating & Cooling

As technology advances, so does power consumption. A prime example is blade servers, which can take up less physical space in a data center but significantly

increase power demands. Making sure there's enough electricity to run the equipment is only one part of a new data center evaluation, though. The heating and cooling

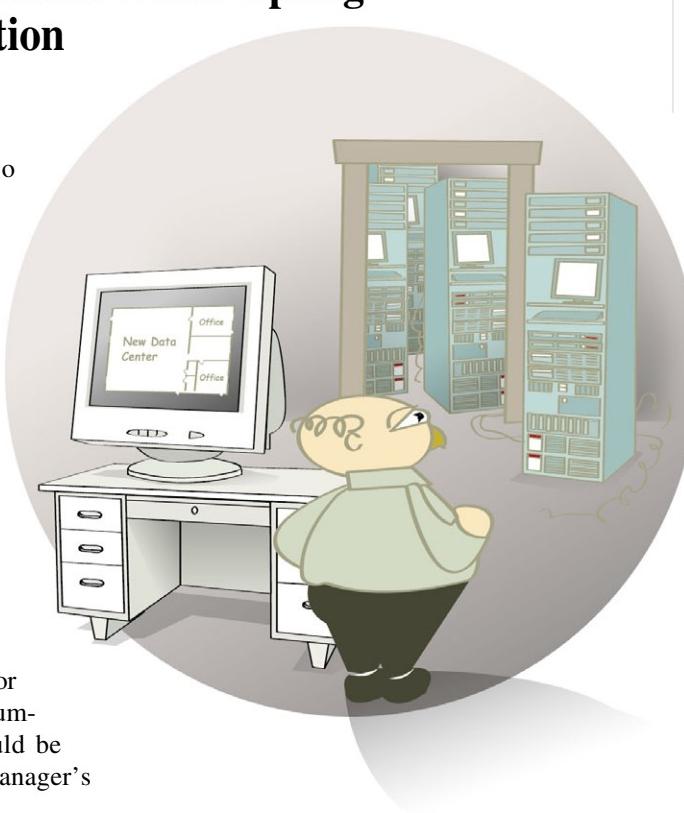
systems also need power to make sure those machines are operating at prime efficiency. In an evaluation of a new building, examine the cooling capacity but also take a critical look at how hot air is channeled from the room, says Chris Crosby, senior vice president of sales and technical services at Digital Realty Trust ([www.digitalrealtytrust.com](http://www.digitalrealtytrust.com)), a developer and operator of data centers.

As data centers scale ever larger, many IT managers spend more time thinking about cooling strategies than heat rejection, Crosby notes, and that can lead to inefficiencies in the future. "Power generation, and utilities use, should make sense according to the scale of the center," he says. "Operationally, the common-sense view is that you don't want to start out with just enough power, cooling, and heat rejection for the IT load that you have now. You can gain efficiencies of scale if you go into larger facilities than you think you need."

#### Space Considerations

When choosing the size of a facility, go a bit larger than planned, but don't get grandiose, says Crosby. Picking a center that will be appropriate for 10 years of

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##### Moving A Data Center

What are the main criteria to consider when picking a new data center space? What planning needs to take place before moving your data center? Who's available to help? Find answers to these questions and more.

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While both forms of networked storage—dedicated SANs and NASes—have been around for years, a number of innovative technologies and products are pushing their functionality, performance, and cost-efficiency to new levels.

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■ **agami Systems** released the agami Information Server AIS1006, an enterprise-class NAS/IP SAN unified storage system that includes 6TB of storage capacity. ■ **Minicom Advanced Systems** launched the Serial Remote Power Switch, which allows users to power on, power off, and reboot up to 128 remote connected servers using the same client interface used to access and control them. ■ **Novell** introduced the latest version of its ZENworks Orchestrator 1.1 management solution. ■ **PineApp's** Mail Se-Cure security technology offers a first line of defense against spam, regardless of email content. ■ **Sendmail** announced a new appliance that protects inbound and outbound messaging for security-conscious businesses. ■ **Tripp Lite** released four new SmartOnline 3-Phase UPS systems that include the smallest footprint for cabinets in their class. ■ **XenSource** announced XenEnterprise v4, the latest permutation of the XenEnterprise line of virtualization deployment software.

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[ Widely decentralized enterprises may face significant challenges with decommissioning. ]

companies are instituting processes for the reclamation of space and power resources.

While freeing up rack space and power resources is a priority for sending equipment to retirement, Bill Davis, vice president and CIO for administration, finance, and technology at Bridgewater State College, cites security as his primary reason for properly decommissioning technology: "By far the greatest concern is that 'old' servers and desktops, if left online, may no longer be actively managed or patched and over time may represent a significant security risk."

#### Making A Plan

The first step in building a successful decommissioning plan for equipment in the data center is to document all the current processes. Organizations need to have a comprehensive understanding about how their currently deployed technologies touch their operations. Yellen suggests interviewing all the constituents, including the business units,

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## STORAGE

AUGUST 24, 2007

## Isilon's New Clustered Storage Systems

### Flexible Storage Expansion For Nearline Archive & Disaster Recovery

**CHOOSING THE RIGHT** storage solution is not easy. You have to understand all the requirements, including availability, size, and speed. Knowing what's required for backup, especially if you have a regulatory requirement, is critical, as well. Then you must take into consideration budgetary constraints.

The combination of the Isilon IQ 9000 and EX 9000 products offers a flexible storage system capable of meeting many—if not all—of your backup and storage needs. Each EX 9000 box holds 9TB of SATA-II disk in

a 2U form factor utilizing SAS to connect to an IQ 9000 node.

The OneFS OS is a distributed file system supporting clustering with a fully journaled and distributed, globally coherent write/read cache, so you can add storage as needed locally or remotely without interrupting service. It also makes secure and reliable disk-to-disk backups possible.

Nearline archiving makes it possible to move less frequently accessed data from



more expensive high-performance/high-reliability storage to cheaper second-tier disk-based storage. This makes it possible to still access the data as opposed to taking the data completely offline with a tape backup.

Disk-to-disk backup makes sense when you have big enough storage to keep an adequate number of backups available. That number will vary depending on the application and the criticality of your data. Some organizations run continuous backups, while others only need nightly incremental and weekly full backups.

Isilon also offers its SyncIQ asynchronous replication software as an offsite disaster recovery solution. This makes it possible to

perform the disk-to-disk backup to a remote location and restore the same way. With the IQ 9000 and EX 9000, it is cost-effective to replicate data to multiple locations.

### Isilon Systems IQ 9000 and EX 9000

**IQ 9000:** \$37,250 per node (three nodes required to run a cluster)

**EX 9000:** \$22,250 per node or \$2,500 per terabyte

Add increased capacity to a flexible backup and storage line of products

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## STORAGE

AUGUST 3, 2007

## Secure, Instant, Offsite Backup

### EVault Protect Lets You Manage Backup & Recovery From A Web Browser

**WHILE DATA PROTECTION** is of paramount importance, companies still fail to deploy sound strategies. Among companies handling data protection internally:

- Up to 71% of restores from tape contain failures
- 60% of companies that rely on backup tapes fail to encrypt the data
- When it comes to executing a data restore, companies lose an average of \$84,000 for every hour of lost activity

Products such as EVault Protect—EVault's premier managed service for

secure online backup and recovery—can take the pain and worry out of backups.

EVault Protect backs up an organization's data to one of EVault's secure data centers. Safe and offsite, the encrypted data is available online at all times for immediate, user-initiated recovery. EVault Protect immediately transfers backup data offsite to a secure data center via the Internet or existing private networks. Online backups happen automatically, without human intervention.

**Rapid recovery 24x7.** Restores of individual files, directories, or entire disk volumes are achieved quickly and reliably.

**Comprehensive Web-based management tools.** EVault Protect's management tools simplify the protection of business-critical data across a network of computers and servers in multiple offices.

**No capital investment.** EVault Protect requires no upfront costs such as tape media or hardware. Backup agents install easily on existing servers and desktops.

**End-to-end security.** EVault Protect makes it easy to comply with regulations governing electronic storage and access to data. Before transfer, backup data is encrypted and remains encrypted until it is restored. There are no "back door" decryption keys; only the individual who created the password can access the backup data.

**World-class support from a trusted provider.** EVault complements its technology solutions with the highest-quality cus-

tomer service and support. EVault support professionals are available 24x7.

**EVault is also seeking partners.** To learn more about becoming an EVault partner, call us at (866) 790-3828 and ask for the IDCSP alliance team. Or go to [www.evault.com/go/evault-inc>IDC](http://www.evault.com/go/evault-inc>IDC) to download more information.

### EVault Protect

Lets companies back up all of their business-critical data to one of EVault's secure data centers

(866) 790-3828

[www.evault.com](http://www.evault.com)



## CLIENTS

AUGUST 24, 2007

## An Upgraded Pen-Driven Slate

### Fujitsu Extends Stylistic ST5100 Series With Low Voltage Intel Processor



**WHILE NOT EVERY mobile professional** may need a pen-based portable, there is no denying that slate design tablets do have a role to play within the SME arena. To help whet the corporate appetite even further, Fujitsu has updated its lightweight Stylistic ST5100 Series with the inclusion of an Intel Core 2 Duo Ultra Low Voltage processor.

Available in two base models, the Stylistic ST5111 and ST5112 Tablet PCs offer improved performance and enhanced battery life. Weighing only 3.5 pounds, each of the tablets features a 6-cell 5200mAh lithium-ion battery capable of delivering up to six hours of operation. A 9-cell 7800mAh battery capable of up to 9.5 hours is also available as an option.

Fujitsu's Stylistic ST5111 is fitted with a 10.4-inch reflective front-lit XGA display optimized for direct sunlight conditions. Meanwhile, the ST5112 features a 12.1-inch indoor/outdoor XGA display with a 160-degree range of viewing angles.

A multifunction stylus pen with an eraser top lets users input data via the tablet's

electromagnetic digitizer. A dual digital microphone array, along with noise cancellation software, is featured on the ST5112.

In addition to Gigabit Ethernet and an internal modem, the ST5100 series is available with Intel's Pro/Wireless ABG Wi-Fi 802.11a/b/g module or with the optional Atheros Super AGWLAN.

The refreshed Fujitsu tablets provide a plethora of features aimed at protecting data. In addition to a standard magnesium-alloy lower casing, each unit also leverages the Fujitsu Shock Sensor utility. This accelerometer-based hard drive protection system actually retracts the drive head whenever an abrupt movement or vibration is detected. Other security features include a dedicated Smart Card slot, a hard drive lock with two-level password protection, a BIOS-enabled Computrace/LoJack theft recovery system, and a universal lock slot. The Stylistic ST5112 Tablet PC also offers a biometric swipe sensor.

#### Fujitsu Stylistic ST5100 Series

Base configuration pricing starts at \$2,599 for the ST5111 and \$1,999 for the ST5112

The latest Fujitsu Tablet PC refresh features Intel Core 2 Duo Ultra Low Voltage processor for greater performance and extended battery life

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## MESSAGING &amp; TELEPHONY

AUGUST 24, 2007

## Server Migrations Simplified

### Quest Helps You Keep Users Connected During Big, Complex Mail Upgrades

**MAIL SERVER MIGRATIONS**, if not done carefully, can make user mailboxes unavailable for minutes, even hours, and possibly lose email messages or related data.

To help companies migrate from Microsoft Exchange Server 2000 or 2003 to Exchange Server 2008, Quest Software has introduced Migration Manager for Exchange Version 8.0, Archive Manager Version 3.7, and a new product, MessageStats Report Pack for Archive Manager. The products are part of messaging migration planning and execution tools for transferring, consolidating, analyzing, and controlling messaging information.

Native migration tools provided by Microsoft, according to Ron Robbins, product manager of Archive Manager, "have always been good for smaller companies—up to one or two thousand users—or companies with simpler needs for Exchange migration." Quest's tools, says Robbins, are for larger customers, typically with 3,000 or more mailboxes.

Quest's Exchange tools are also intended for companies with more complex scenarios—for example, where multiple Exchange servers, such as from mergers or acquisitions, are being merged into a single Exchange server. "Microsoft doesn't support merging of two Exchange organizations," says Robbins. "And we can also migrate from multiple servers to multiple servers." Quest's ZeroIMPACT features "minimize the impact of migration to end

users, with no down time and requiring no interaction from end users," Robbins notes. "Typically, when you move mailboxes, there's profile updating, which can take a good bit of time. Information can get locked while mailboxes are being moved."

Archive Manager helps Ex-change migration go faster by reducing the amount of data to be migrated and protects messages from accidental modification.

The Archive Manager Report Pack provides additional features beyond Quest's MessageStats reporting and analysis software, such as statistics that pertain to email archiving and analyzing information in the Archive Manager database that can simplify archiving and migration.

### Quest Software Migration Manager for Exchange 8.0, Archive Manager 3.7 & MessageStats Report Pack for Archive Manager

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\$5 per mailbox for MessageStats

Tools that simplify migration of large or complex Exchange Server environments

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# MarketPlace NEWS



## Forrester Research Says Businesses Are Delaying Vista

**COMPANIES THAT HAD PLANNED** to upgrade to Windows Vista shortly after its release have been putting off the deployment, reports Forrester Research. A Forrester study in May 2006 showed 53% of those surveyed planned to deploy Vista within two years of its release, with 31% planning deployment within the first year. However, those numbers have not materialized; in this latest study, Forrester reports "most" of the IT administrators it asked are planning to wait until Vista's SP1 release before they "seriously consider" deployment. Respondents cited software incompatibilities, hardware upgrade requirements, and comfort with their current OSes as reasons for delaying Vista deployment.

## VMware Stock Price Soars On IPO

**ON ITS FIRST DAY OF TRADING**, VMware stock traded at up to \$55.50 per share, about 91% more than its official asking price of \$29 a share. The stock closed its first day of trading at \$51 a share. The initial public offering raised about \$1.1 billion for the company, which makes virtualization software designed to let users run several operating systems on the same PC at the same time. The company has sales of about \$1 billion a year.

## Former CA CEO Heads To Prison

**SANJAY KUMAR**, former CEO of CA, began serving his 12-year prison sentence at a minimum security federal prison in Fairton, N.J. Kumar was convicted of conspiracy to inflate the company's earnings and then interfering with a federal investigation by lying to investigators and bribing a potential witness. With time off for good behavior, experts say Kumar will likely spend about 11 years in prison. In April, Kumar was also ordered to pay about \$800 million in restitution to CA investors; he must pay about \$52 million of that this year.

## Former Brocade CEO Found Guilty

**THE FORMER CEO** of Brocade Communications Systems has been found guilty of charges related to the backdating of stock-option grants by the company. Gregory Reyes was convicted by a jury on all 10 charges brought against him, including

securities fraud, conspiracy, and falsifying financial records. The charges stemmed from accusations that Reyes had falsified documents, including meeting minutes and financial records, so it appeared that stock options were granted while company stock was low. Reyes faces up to 20 years in prison and \$5 million in fines on some of the counts.

## Dell To Issue Payment To Former CEO

**IN A FILING** to the U.S. Securities and Exchange Commission, Dell said that once it has filed its 2007 fiscal year annual report, which is long overdue, it will pay its former Chief Executive Officer, Kevin Rollins, \$48.5 million for his stock options. Rollins resigned from the position in January, when Michael Dell took over in an attempt to return the company to its profitable days, regain market share it had lost to HP, and avoid a lawsuit with investors. Rollins' original severance package had been \$5 million, but Dell's board of directors recalculated his payment to include the cash value of the 7.4 million vested stock options he had.

## Quincy, Wash., Popular Data Center Site

**BUILDING A NEW DATA CENTER** and concerned about electricity costs? Consider Quincy, Wash., according to Base Partners, a data center development and advisory firm. In a Base Partners study of a typical data center, Quincy ranked least expensive among the popular cities studied. While the national average for electricity is 6.2 cents per kilowatt hour, according to Base Partners, electricity in Quincy costs about 1.8 cents per kilowatt hour. That amounts to about \$1.62 million a year for the typical data center Base Partners studied, compared to \$17.52 million a year in the New York/New Jersey area. Microsoft and Yahoo!, along with Base Partners, have announced plans to build data centers in Quincy.

## Apple Still Leads In Satisfaction

**ALTHOUGH ITS CUSTOMER** satisfaction ranking dropped 5% in the past year, Apple still leads with a score of 79 out of 100 in the latest American Customer Satisfaction Index. The index, which is compiled by researchers at the University of Michigan, shows that overall satisfaction with PC makers dropped 3% in the past year; customer satisfaction with products in general is up 1% over last year. Dell also dropped 5% in the past year, to 74. HP improved 1% to 76, although its Compaq division ranked worst among PC makers at 73.

## Group Studies WLAN Best Practices

**ACCORDING TO A STUDY** conducted by Aberdeen Group, the most successful

corporate WLAN deployments are based on a set of practices that has the ability to improve employee collaboration and flexibility. The survey information was gathered from 315 IT respondents. Among the findings were that best-in-class companies reported a 27% increase in "flexibility of the workforce" (or being able to move freely around campus while maintaining the ability to access corporate data), a 26% increase in "collaboration of the workforce" (or being able to work together anywhere at anytime), and a 29% increase in the "quality of meetings."

## India Tops List Of Outsourcing Contracts

**TECHNOLOGY PARTNERS** International reports that India beat out China, Japan, and Australia to top the list as the largest consumer of outsourcing services in the Asia-Pacific region. Outsourcing contracts from India made up nearly one-third of the total contracts for the region for the first six months of this year and were worth \$1.7 billion. Japan's contracts were worth \$1.2 billion for second place, followed by China with \$1.1 billion. Technology Partners notes that the majority of the outsourcing contracts were with multinational service companies such as IBM and HP. Although the global trend has been toward smaller contracts, the worldwide outsourcing market has continued its solid growth.

## Risks Of Virtual Businesses

**GARTNER HAS WARNED BUSINESSES** to be careful when considering staking out territory in virtual worlds, such as Second Life. In a statement, Gartner analyst Steve Prentice says, "When planning enterprise activities in virtual worlds, an enterprise's awareness of the risks, as well as a reasoned and objective analysis of them, will enable it to objectively evaluate the overall situation and offset risks against often-nebulous benefits." Possible risks Gartner lists include IT-related security risks and issues with confidentiality. Gartner emphasized that companies should keep an open mind regarding virtual worlds while ensuring they keep themselves protected and in compliance.

## Toshiba Recalls Batteries

**ACCORDING TO THE U.S. CONSUMER** Product Safety Commission, Toshiba has recalled another group of lithium-ion laptop batteries made by Sony. There are about 1,400 notebooks affected by the recall, which include some of Toshiba's Satellite A100, Satellite A105, and Tecra A7 notebooks built between January and April of last year. The Sony batteries in question pose a fire hazard from overheating. To help identify affected batteries, Toshiba has a Windows utility designed to sniff out defective batteries, which can be downloaded on its Web site. According to Toshiba, the current recall is not related to the large recall made by Sony last year.

## Nokia Issues Phone Battery Recall

**FAULTY BATTERIES IN NOKIA** mobile phones may short-circuit and overheat while they are charging, the company says. Matsushita Battery Industrial made the 46 million potentially problematic batteries, which Nokia is offering to replace for free for all its customers. Matsushita produced the batteries in question between December 2005 and November 2006, and customers worldwide would have purchased the phones in about the same time frame. Nokia reports it has heard of about 100 occurrences of the batteries overheating, although no one has reported serious injury or damage to property. Concerned customers can go to Nokia's Web site to see a list of affected phones.

## Upcoming IT Events

### - AUGUST -

**Gartner Financial Services Technology Summit**  
August 27-29  
New York, N.Y.  
[www.gartner.com/it/page.jsp?id=498092&tab=overview](http://www.gartner.com/it/page.jsp?id=498092&tab=overview)

**Gartner Enterprise Planning & Architecture Strategies Seminar**  
August 28-29  
New York, N.Y.  
[www.gartner.com/2\\_events/conferences/epas073.jsp](http://www.gartner.com/2_events/conferences/epas073.jsp)

### - SEPTEMBER -

**Enterprise Architecture 2007**  
September 5-7  
Washington, D.C.  
[events.fcw.com](http://events.fcw.com)

**InfoSecurity**  
September 11-12  
New York, N.Y.  
[www.infosecurityevent.com](http://www.infosecurityevent.com)

**Data Center World Fall 2007**  
September 16-19  
Dallas, Texas  
[www.datacenterworld.com](http://www.datacenterworld.com)

**Gartner Business Process Management Summit**  
September 17-19  
Orlando, Fla.  
[www.gartner.com/it/page.jsp?id=501307&tab=overview](http://www.gartner.com/it/page.jsp?id=501307&tab=overview)

**Intel Developer Forum**  
September 18-20  
San Francisco, Calif.  
[www.intel.com/idf](http://www.intel.com/idf)

**Gartner Open Source Summit**  
September 19-21  
Las Vegas, Nev.  
[www.gartner.com/it/page.jsp?id=502444&tab=overview](http://www.gartner.com/it/page.jsp?id=502444&tab=overview)

**Government Technology Conference East 2007**  
September 24-27  
Albany, N.Y.  
[www.govtech.net/gtc/index.php/GTCEast07](http://www.govtech.net/gtc/index.php/GTCEast07)

### - OCTOBER -

**Gartner Symposium/ITxpo**  
October 7-12  
Orlando, Fla.  
[www.gartner.com](http://www.gartner.com)

**Business Intelligence 2.0 Conference**  
October 16-18  
San Diego, Calif.  
[www.sharedinsights.com/events/conferences](http://www.sharedinsights.com/events/conferences)

**ITEC Chicago**  
October 17-18  
Schaumburg, Ill.  
[www.goitec.com](http://www.goitec.com)

**Technology + Learning Conference**  
October 17-19  
Nashville, Tenn.  
[www.nsba.org](http://www.nsba.org)

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## WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	August 8 \$	August 15 \$	% change from previous week
Avaya	AV	\$10.30	\$16.60	\$16.23	▼ 2.23%
BEA Systems	BEAS	\$12.94	\$12.09	\$11.66	▼ 3.56%
Computer Associates	CA	\$23.57	\$25.18	\$23.63	▼ 6.16%
Cisco Systems	CSCO	\$20.80	\$31.68	\$29.92	▼ 5.56%
Dell	DELL	\$21.80	\$27.78	\$26.30	▼ 5.33%
Electronic Data Systems	EDS	\$23.62	\$22.86	\$22.44	▼ 1.84%
Google	GOOG	\$377.35	\$525.78	\$497.55	▼ 5.37%
HP	HPQ	\$35.22	\$49.40	\$46.15	▼ 6.58%
IBM	IBM	\$78.97	\$112.98	\$111.32	▼ 1.47%
Intel	INTC	\$18.17	\$24.68	\$23.22	▼ 5.92%
McAfee	MFE	\$21.19	\$34.85	\$33.40	▼ 4.16%
Microsoft	MSFT	\$26.07	\$30	\$28.10	▼ 6.33%
Oracle	ORCL	\$15.73	\$20.20	\$19.18	▼ 5.05%
Red Hat Software	RHT	\$24.72	\$22.69	\$21.01	▼ 7.4%
Sun Microsystems	SUNW	\$4.69	\$5	\$4.65	▼ 7%
Symantec	SYMC	\$18.18	\$17.97	\$17.87	▼ 0.56%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

## SIX QUICK TIPS

# Get The Most Out Of Your Equipment Repair Process

by John Brandon

**THE SUBJECT OF DATA CENTER** equipment repairs is a sticky one—so sticky that many IT managers have struggled with it for years. For starters, it's a troubling issue because anytime you repair a network switch or an access point, there's no guarantee that the repaired device won't fail again. And with lowered costs for data center hardware, especially servers, it's always tempting to upgrade to the flashiest and fastest. Adding to the repair-or-buy debate is the issue of buying previously used gear, which may provide a quick solution and an upgrade but may not necessarily be the most reliable compared to new equipment under warranty. Here are some tips to help solve the equipment repair dilemma.

### Repair At The Core Layer

Data center managers should take a long, hard look at the core layer for equipment repairs. This includes Fibre Channel switches at the data center's main points of ingress and egress access. If a failure exists at this level, it is wiser to consider a repair because the data center greatly depends on these switches; a failure is

much more catastrophic to the business, and the failure rate is so low that repaired units can last for years. Conversely, the access layer—the switches closer to the end users—should be considered a prime candidate for replacement because there is

**Data center managers should take a long, hard look at the core layer for equipment repairs. This includes Fibre Channel switches at the data center's main points of ingress and egress access.**

more equipment at this layer, and replacing these switches and equipment won't have a detrimental effect on the business.

"Devices at the core layer are more costly, and cost-conscious IT managers should spend more time in repairing infrastructure at this level, whereas network hardware at the access layers are more cost efficient per port, and an IT manager may find it more effective to replace the equipment at this level rather than spend capital on

repair services," says Randy Murray, a spokesperson for Horizon Datacom Solutions ([www.horizondatacom.com](http://www.horizondatacom.com)), an IT equipment repair and refurbishing firm.

### Closely Examine Repair Costs

IT repairs can vary widely, from a power supply repair that costs \$50 to a server repair that costs \$500. One important step in deciding what to repair is to evaluate how much the repair will cost compared to replacing or refurbishing the equipment,

"Often, we can provide a refurbished replacement the next day while they send us their unit for repair, if needed," says Murray. "They can then choose to have their unit refurbished and returned or simply keep the replacement and receive a credit for their old unit. IT managers can replace equipment with refurbished equipment from a reliable vendor and receive reliable, warranted hardware."

### Determine The Cost/Benefit Based On Equipment Age & Importance

IT analyst Michael Gartenberg from Jupiter Research says the decision on data center repairs relates directly to the age of the equipment and how important it is to system uptime. He says equipment that is older than two years should probably not be repaired due to the time of repair, the resulting disruption in services, and the associated benefits with an upgraded component that come when you use the latest technology advancements instead of repairing equipment.

"If you already have a backup ready for a system, and a replacement is readily available or the failed equipment is easy to fix, such as a power supply in a server, a repair makes sense," says Gartenberg. "Otherwise, since the data center is the heart and soul of the enterprise, a repair may not make sense. If you make a mistake with a network printer or a corporate LAN endpoint, you will have to apologize to your boss. If you make a mistake in the data center with a repair, you might be looking for a new job." □

### EASIEST TO IMPLEMENT:

### Contract For Repairs

Horizon Datacom Solutions' ([www.horizondatacom.com](http://www.horizondatacom.com)) Randy Murray suggests data center managers view repairs as a contractual agreement—and it's not out-of-line to ask for bids on a repair. He says some admins will request a detailed breakdown of the repair costs to decide if the repair is worth the

sometimes high expense or whether it makes more sense to replace the equipment outright. "What you'll need to do is find someone you can trust that can give you advice," says Murray. "Look for a solid repair quote, just like working with an auto mechanic."

### BEST TIP:

### Consider Cooling Benefits To Replacement

IT equipment that has failed can sometimes present an opportunity for managers to look closely at new hardware that provides better cooling in the data center and adheres to more environmental standards, says Rob Enderle, principal analyst at the Enderle Group. He says that any equipment, especially core systems such as servers and storage that is older than five years, is a good candidate for replacement instead of repair due to the cooling benefits of newer products.

"The main reason to replace [instead of repair] is thermal loading, since newer hardware will do more work for a given heat output, and equipment closets and raised floor rooms have set thermal limits," says Enderle. "Often it is vastly cheaper to replace the hardware with newer, more efficient products than it is to upgrade the cooling systems that cool the areas where they reside."

says Paul Kiley, a "special agent" with the Best Buy Geek Squad for small businesses. As onsite consultants, Geek Squad agents evaluate the buy or repair equation and can typically determine the wisest course of action for small businesses.

Geek Squad typically focuses on server hardware and software, wireless access points, and local storage issues but not switches or server storage technology, such as SANs. Still, in most cases, costs are similar between an SME and a large enterprise when it comes to repairs for standard equipment, such as a failed motherboard, a corrupted hard disk, or a failed power supply.

"Repair costs can vary greatly due to parts' cost and the varying nature of the problems we see. Replacing a power supply will clearly be more costly than replacing a failed hard drive cable. Frequently, with an aging computer system, the cost of parts can be significant if a major component, such as a motherboard, is faulty," says Kiley. "With the ever-falling cost of computing hardware, coupled with ongoing performance increases in the industry, quite often there is true wisdom in viewing a hardware failure as an unexpected opportunity to upgrade to a newer and faster system."

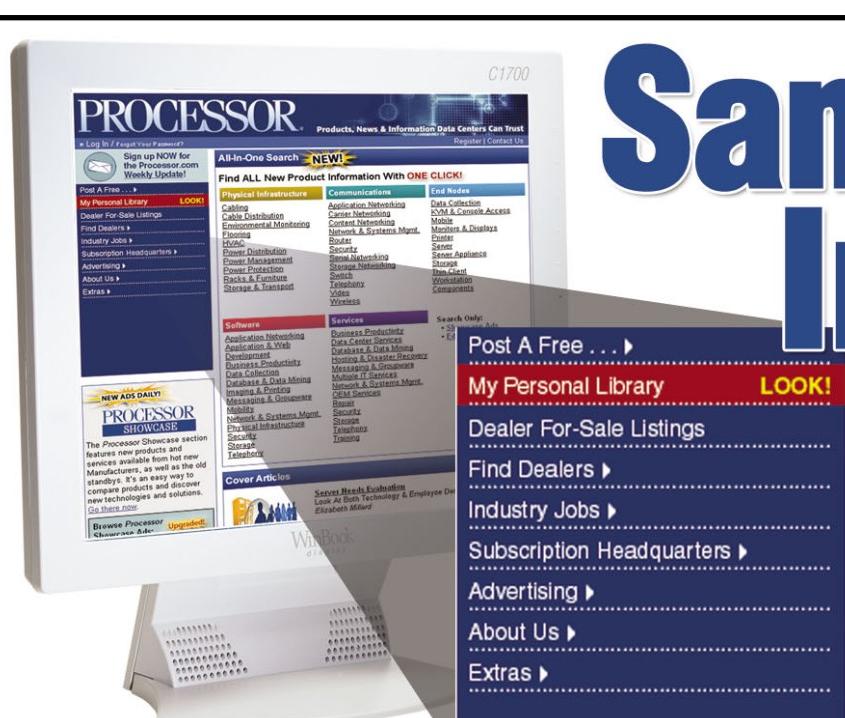
### Find Vendors That Can Hot-swap While You Wait For Repairs

Murray suggests working with a vendor that can offer a hot-swap for failed equipment. For example, with a Cisco ([www.cisco.com](http://www.cisco.com)) switch, you can first request a replacement unit, then send in the failed switch for repair, and then either return the replacement unit or purchase it as a backup.

### BONUS TIPS

**Understand repair variables.** Horizon Datacom Solutions' ([www.horizondatacom.com](http://www.horizondatacom.com)) Randy Murray suggests that managers understand which devices are more prone to failure than others and which manufacturers are typically more in need of repairs. Network switches, he says, are common repair items. For any devices that are more in need of repair, it's wise to extend warranties on those products.

**Choose repair vendors wisely.** Horizon Datacom supports many network switches, especially those from Cisco ([www.cisco.com](http://www.cisco.com)). Alliance Datacom ([www.alliancedata.com](http://www.alliancedata.com)) repairs WAN and Telecom equipment. First Tech Communications ([www.firsttechcommunications.com](http://www.firsttechcommunications.com)) repairs wireless and wireline devices. And one of the best avenues for repair is just the hardware vendor itself, such as Cisco or IBM ([www.ibm.com](http://www.ibm.com)), which both offer an extensive repair service for customers (both onsite and off-site).



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# Virtual RAID Boosts Video Surveillance Storage

Pivot3 Enters The Market With An IP-based RAID Platform

**START-UP PIVOT3** has entered the scalable network storage market with a “virtual distributed RAID” platform, which the company says can slash storage infrastructure costs by half while improving scalability and data availability.

The RAIGE (RAID Across Independent Gigabit Ethernet) storage cluster is the first system from Pivot3 based on a block-level virtualization architecture that eliminates



the need for traditional RAID hardware and storage controllers. Data-protected storage is supported across networked nodes, called Databanks, which are built using x86-based servers connected by Gigabit Ethernet.

“This is an alternative that not only can reduce cost up to 50% but can also provide five times or more the performance of traditional storage,” says Jeffrey Bell, vice president of marketing for Pivot3.

The ability for RAIGE to simply and cost-effectively handle data-intensive application workloads has made it attractive to customers within the video surveillance space. Breaking into that market is requiring Pivot3 to work within the existing partner community, a practice the company is likely to continue to use as it targets additional markets.

“Businesses considering video surveillance are looking at cameras or video management software and are working with security integrators,” Bell says. “We’ve been working with those types of providers to get the leverage we need in the market.”

The platform is well-suited for apps requiring content aggregation, including use for medical records, oil and gas exploration, and archiving. The use of standard server platforms can allow a business to create a pay-as-you-grow model, adding drives as needed without disruption.

“Data recovery times are five to 10 times faster than other storage alternatives due to system-wide parallel processing and a Pivot3-created algorithm that optimizes the rebuild process,” he says. Data is continuously made available through volume provisioning changes that support on-the-fly configuration changes.

## Pivot3 RAIGE Storage Cluster

\$17,499 for 6TB; \$22,499 for 9TB

Storage cluster that uses block-level virtualization to reduce cost and improve performance

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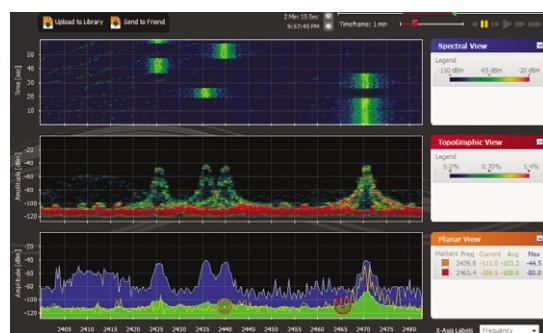
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MetaGeek Wi-Spy 2.4x Helps Troubleshoot Interference

THE 2.4GHZ BAND is getting crowded, so you need to be able to discern ever-smaller gaps in the noise. That’s why MetaGeek developed the Wi-Spy 2.4x—a 2.4GHz spectrum analyzer with an external, SMA-compatible antenna and nine times the resolution of the original Wi-Spy.



MetaGeek's new Chanalyzer 2.1 software offers improved graphics and more powerful controls.

Wi-Spy is the world’s smallest 2.4GHz spectrum analyzer. It’s so small (and inexpensive) because it harnesses the processing power of the computer you already own. Wi-Spy is perfect for troubleshooting interference from many devices, including Wi-Fi (802.11b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices.

With the addition of a reverse-polarity SMA adapter, Wi-Spy 2.4x offers the additional functionality and accuracy of adding an external antenna. The Wi-Spy 2.4x ships with a powerful little antenna, but it’s a snap to add any RP-SMA-compatible antenna you choose.

MetaGeek’s new Chanalyzer 2.1 software features improved graphics; powerful new play-through controls; and an even friendlier user interface that presents a more clear and concise view of your wireless landscape. Chanalyzer 2.1 supports both the original Wi-Spy and Wi-Spy 2.4x.

Combined with the Wi-Spy spectrum analyzer, Chanalyzer will help you visualize, troubleshoot, and optimize your wireless network at the office or on the road.

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- Your network connection drops when the phone rings

## MetaGeek Wi-Spy 2.4x

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A 2.4GHz spectrum analyzer designed for troubleshooting interference from Wi-Fi (802.11 b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices

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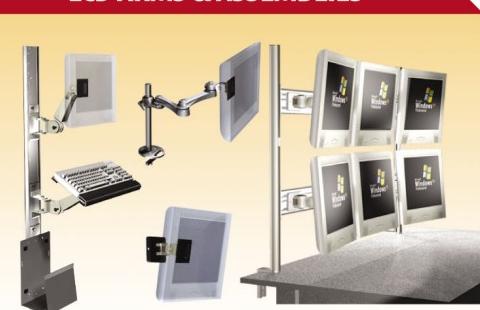
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# Plan It & You Will Move

## Experts Instruct How To Build A Flawless Data Center Moving Plan

by Christian Perry

• • •

**WHETHER YOU'VE BUILT** a new data center or are moving your existing one to a new location, performing the transfer of equipment and resources can be a harrowing process if not properly planned. Far too many elements can become lost in the shuffle, resulting in a data center that easily underperforms expectations and serves as an outright money drain.

But it doesn't have to be that way. Armed with an effective, forward-thinking plan, IT managers can ensure that the move occurs with as few hitches as possible. When those hitches do arise, enterprises can then consult the plan and stick to the design instead of veering into territory that could threaten the overall integrity and efficiency of the new center.

### Who To Recruit

According to Chris Crosby, senior vice president of sales and technical services at Digital Realty Trust ([www.digitalrealtytrust.com](http://www.digitalrealtytrust.com)) Chris Crosby and CareTech Solutions' ([www.caretechsolutions.com](http://www.caretechsolutions.com)) Louie Cashera weigh in with their opinions on these essential plan ingredients.

### Compiling The Plan

Every master plan formula for moving a data center should include a list of basic elements. Digital Realty Trust's ([www.digitalrealtytrust.com](http://www.digitalrealtytrust.com)) Chris Crosby and CareTech Solutions' ([www.caretechsolutions.com](http://www.caretechsolutions.com)) Louie Cashera weigh in with their opinions on these essential plan ingredients.

#### Crosby:

- Telecom
- Structured cabling
- Rack and stack (assembling hardware)
- Remote keyboard, video, and mouse
- Airflow design
- Pre-electrical distribution
- Network testing and vetting (before the move)
- Logistics of shipping and delivery (loading dock, structural reinforcement, policies on loading dock)

#### Cashera:

- Equipment inventories to be contained in room
- Power and cooling requirements
- Fire suppression
- UPS and backup generator power requirements
- Determination of data center construction and service tier rating

trust.com), a company that owns, acquires, develops, and manages real estate related to technology and data centers, three key groups should be involved in the development of a master plan for moving a data center: the IT team, the facilities management team, and a finance representative to help design the financial modeling.

"A common mistake that many companies make is that they involve only one or two of these key groups but not all three," Crosby says. "If you lose any of these three perspectives, there is a significant impact on the success of your project."

For example, he continues, involving only the facilities management group could result in a plan that doesn't focus enough on the network, in turn leading to significant problems once the move commences. On the other hand, if the IT department is charged with leading the planning process with adequate input from facilities management, it might not provide enough focus on best practices for rack layout and configuration requirements.

Insight for the plan shouldn't stop at internal sources. In fact, there's a horde of external sources that can and should contribute to the master moving plan because without their contribution, enterprises could fall victim to problems well out of their control. Louie Cashera, CIO for CareTech Solutions ([www.caretechsolutions.com](http://www.caretechsolutions.com)), which specializes in healthcare IT and health information management, says that for new data centers, design engineers and builders are needed to flesh out the plan according to the current and future computer equipment requirements of the organization. Moving an existing data center to a new location also requires outside input.

"If the data center project is strictly a relocation of the existing data center contents, then a plan to physically deinstall,

move, and reinstall equipment at the new data center is formulated," Cashera explains. "This will involve the hardware platform support vendors and moving company, in addition to internal IT staff who will



test and recertify the new site for operation once the relocation and installation is completed."

#### Ingredient List

Although the elements for a master moving plan can and will vary depending on the size and use of the data center, there are basic pieces that complete every puzzle. In addition to actual logistics for the physical move, such as packing and trucking, managers should think both in terms of equipment and planning.

Crosby says that enterprises need to include Telecom, structured cabling, rack and airflow layout, rack and stack (the process of assembling hardware), airflow design, pre-electrical distribution, and similar elements in the plan. "Each of these elements involves a different skill set, and one of the most important things you can do in the early planning process is to identify vendors and consultants whose collective expertise will cover each of these areas," he says.

Naturally, current equipment and design must be included on the plan, but Cashera says that companies also need to consider future plans, particularly with space

allocation, power requirements, and cooling requirements.

#### Plan Principal

Depending on the size of the organization, the person who is charged with ensuring that the plan is followed as designed can vary. Cashera says this responsibility typically falls to the CIO at larger enterprises, while small to midsized enterprises will turn to the IT director or IT operations manager. "Obviously, there are many people involved in such projects that would participate and report progress through a project team to the key management figure," notes Cashera.

Crosby agrees, explaining that the IT person overseeing the moving plan should have a strong facilities-based resource at his or her side throughout the process, as this will help the point person to retain focus on the facilities side of the picture. He also notes that it's crucial to allow some flexibility in the moving plan because monkey wrenches are guaranteed to emerge.

"One of the key ways to make your plan flexible is to have a contingency budget, which builds in resources to handle the surprises that inevitably pop up,"

Crosby says. "By [doing this], you will be able to address these surprises with adequate resources as they come up, without having to fight for additional budget."

#### Flex Plan

Dr. Joe Parker, vice president of advanced networks for Glimmerglass ([www.glimmerglass.com](http://www.glimmerglass.com)), maker of Glimmerglass Intelligent Optical Switches, says flexibility is so valuable that it's actually the most crucial aspect of a data center move. In fact, he says that almost all other considerations in the master plan should be derived from the flexibility focus.

"Anyone planning a data center move is certainly already aware that we are in a very rapidly changing time," Parker says. "While the data center itself might be designed to last 10 years, the initial servers will probably last only two. And while the churn of equipment is well-known, the other changes in the last 10 years which have impacted data center moves are perhaps less apparent. A lot has changed since the old data center was designed—a lot which must be considered in any new move." □

## SERVICES

AUGUST 3, 2007

# What Do You Do With Your Old Tapes?

Recycle Your Media Buys All Types Of Tapes & Recycles Them

**THE MOST VIABLE SOLUTION** for your end-of-life media is to recycle using a reputable service provider such as Recycle Your Media. Not only is tape recycling environmentally sound due to the overabundance of e-waste in landfills, it is also economically sensible because you can recoup IT costs.

When choosing whether to recycle tapes, consider these factors:

- Tape that has been mishandled or is old and worn out or damaged cannot be used again. This tape should be destroyed.
- If your tape media is in good condition, recycle it. Even if a tape is two years old,



Data tapes we recycle: SDLT, 9940, 3590, LTO, AME AIT, and many others.

it likely has not been used continuously. It is common to find tape that has only been used for a fraction of its useful life.

- If you're upgrading to the newest tape technology, chances are other organizations can still utilize the tapes. In this case, recycling is the right option.

Only professional-grade degaussing equipment, correctly calibrated and operated by experts such as Recycle Your Media, will do a proper job of erasing cartridges.

Recycle Your Media provides a service that is environmentally conscious and prides itself in maintaining safe and secure methods for your end-of-life data solution.

Sell us your new, used, or even obsolete media. Your sensitive data is secure and destroyed with manufacturer-approved processes and equip-

ment, and you will get a Confidentiality Agreement upon request.

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# Picking A New Data Center Space

*Continued from Page 1*

growth can lead to waste, he notes. "We espouse more of a pod architecture, where you build your data center around components like transformers or generators," he says. "Data centers don't ramp well by growing one rack at a time."

It can be a tricky balance that calls to mind the fable of Goldilocks: When can you know when a space is "just right"? Crosby suggests a short-term growth plan of no more than a few years.

## Planning For The Future

Here are some elements to consider to make sure a new data center space will accommodate future enterprise growth.

- Hiring plans for the next two to three years
- Business objectives
- Research and development directions
- Telecommuting and flex time trends among employees
- Data storage needs
- Anticipation of Web-based application use and data creation
- Network traffic upticks
- Electricity costs in the local area

Other considerations when choosing space include the effects of multitenant occupancy, physical security controls, the separation of parking areas and loading docks from perimeter walls, and proximity to hazardous materials that area manufacturers might produce. The construction in the surrounding area is also important. If there's a boom in development, for example, the ensuing construction could cause power outages in the short term or interruptions to network service.

Another element is network and equipment maintenance services. An SME could opt for an IT-specific company, such as SMS (Systems Maintenance Services; [www.sysmait.com](http://www.sysmait.com)), which employs local field engineers at several service center locations. The firm can act as a single point of fault resolution and can replicate hardware at one of the service center labs.

### Weatherproofing

Particularly in states where extreme weather might occur, such as a drought-inclined state or one with hurricanes or floods, ensuring proper weatherproofing is imperative. Experts note that one important measure is to find a data backup company that's out of state to make sure that if a center gets destroyed, the data will at least be safe.

There are server colocation facilities spread across the country, and many, such as Atomic Data Centers ([www.atomicdatacenters.com](http://www.atomicdatacenters.com)), provide a number of services, such as telephony, WAN optimization, VPNs, and network architecture design consulting.

For the main center, though, managers can employ weatherproofing strategies to prevent problems that humidity, water, and power blackouts cause, says Jim Reinert of data recovery firm Ontrack ([www.ontrackdatarecovery.com](http://www.ontrackdatarecovery.com)).

One aspect of a new or refurbished center is the air-conditioning system and how regularly the filters and ducts are cleaned. When evaluating a potential center, don't be afraid to ask realtors or building inspectors to open up the system for a look. "This seems like a low-tech tip," says Reinert. "But if you can make sure the AC unit is free of gunk, it could save you from a failed unit later on. The unit might not be able to drain properly if it's older or dirty, and that can cause sealing damage and leaks that could get onto equipment."

Other factors to inspect for weatherproofing include roof wear-and-tear, backup generator efficiency and duration, temperature monitors, and the existence of emergency procedures for moving equipment quickly.

### Budget Availability

Every data center manager would love to have an ultra-secure facility that's perfectly cooled, never suffers from power loss, and has plenty of room for new equipment. But, unfortunately, efficiency takes money.

Several budget considerations need to come into play, notes Peter Sacco, president of PTS Data Center Solutions ([www.ptdcs.com](http://www.ptdcs.com)). These include project management; technology systems design; relocation of server and storage equipment; planned downtime during a move; relocation services such as movers, new cabinets, and engineering or construction changes; and maybe architectural services.

"You need to be realistic about your budget needs," Sacco says. "For example, you might think you can save on real estate costs by increasing density, but you're going to be running out of power or wondering how to get the heat out of the space."

One cost consideration will be whether to revamp an older building or move into a new space, says Ron Hughes, president of California Data Center Design Group ([www.ccdg.com](http://www.ccdg.com)). Factor in the costs of supporting equipment in a remodeled space, Hughes says. "It's a real challenge. Some choose the specially designed racks to improve cooling in a remodeled space, but you have to think about whether it's really working for you in general or if you're going to great lengths to try and make the space work." □

# Retiring IT Equipment

*Continued from Page 1*

finance, and all IT functions, to determine any gaps in the processes. A good decommissioning process will have three types of requirements: business requirements (approvals, chargebacks), IT requirements (physically decommissioning, disposing of equipment), and financial (depreciation/tax implications, contract termination).

Davis and his team incorporate decommissioning directly into asset management and life cycle management. By documenting where systems are located, who manages them, what services they provide, and how they are secured physically and virtually,

Davis can better determine which machines are replaced on what schedule and decide if the systems will have an extended life for a lower priority application as they are retired from their primary purpose. Once assets have reached the end of their life cycle, Davis' decommissioning plan also determines the method of disposition. "We pursue a range of options, including using technology recycling firms, occasionally trading assets to buyers/resellers of used equipment, sometimes loaning or donating older equipment to charitable organizations in our community. Because we are a public institution, we also offer retired equipment to other state

agencies and schools when it is too old to serve its intended purpose here," says Davis.

### Challenges

But there is more to decommissioning equipment than just pulling the plug and carting it off to the recycling center. Many servers such as Domino ([www.ibm.com](http://www.ibm.com)) and Exchange ([www.microsoft.com](http://www.microsoft.com)) have specialized utilities that aid IT staff in the decommissioning process. These tools help to ensure that the dependencies and data are properly transferred to the new server before the old asset is taken offline.

According to Yellen, implementing a decommissioning process is all about communication and understanding your organization's requirements. "Organizations should approach this the same way they build any other business process—get buy-in from management, build consensus, and roll out the new process incrementally to build a step-by-step history of success," he advises.

However, widely decentralized enterprises may face significant challenges with decommissioning. When ownership and management of desktops and servers is broadly distributed, central IT shops may need network management and inspection tools simply to get a full inventory of assets across the enterprise. A clear policy that establishes the value of decommissioning can be important, and a simple decommissioning process

for system managers across the enterprise is essential.

"We are fortunate here to have centralized processes for management and purchasing of technology assets, so we can build decommissioning into the asset life cycle," says Davis, "Our approach has been to recognize that business information is the critical resource we are safeguarding, not the box that holds it, and to build our policy with that in mind."

### Looking Ahead

Physical servers have been the primary focus because of their large numbers in enterprises and data centers. They represent the highest rate of change as new applications, and more powerful systems are constantly being introduced. However, many organizations are looking to virtualization to improve efficiency and to reduce the number of physical servers within the data center.

Yellen predicts that the decommissioning of virtual servers will become just as big of a problem as with physical servers. "Processes for decommissioning virtual servers are, in most cases, less mature than those for physical servers," he notes, "Virtual server sprawl is something that IT organizations will be talking about in the not so distant future." The added bonus of decommissioning virtual assets, however, will be nothing to cart away to the trash bin. □

## Steps For Safely Decommissioning Data Center Assets

**Inventory and identify.** The key to reducing unnecessary assets in the data center is to first have a detailed inventory of current assets. Identify what processes are linked to the asset.

**Plan.** Determine the requisite steps for decommissioning ahead of time, such as the use of specialized utilities or software or hardware upgrades for provisioning the succeeding assets.

**Communicate.** Give sufficient notice to all parties who have a vested interest in the asset to be decommissioned. Alert everyone as to when and how changes will occur.

**Follow through.** Ensure safe and proper disposal of decommissioned assets, such as the removal of software and data from storage media, recycling, etc.

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# Tips For Moving Your Data Center

## Advice For A Smoother Move For Your SME

by Don Reisinger

**FOR DATA CENTER MANAGERS**, one of the most nerve-wracking tasks to undertake is moving an entire data center without losing any important information. And while the manager may have already chosen a site, selected a data center moving company, and developed an overall master plan, it's the actual move that makes him cringe. So, with that in mind, a variety of tips and advice is available to data center managers to make the transition as smooth as possible.

When moving a data center, nothing can be left to chance. As data center managers are well aware, the entire move must be as quick and as seamless as possible. Because that one element controls everything in the respective business, data center managers should be ready for anything. DataMove ([www.datamove.net](http://www.datamove.net)) CEO Clay Whitney says that understanding the needs of your business is the first step for launch day. He notes, "A thorough analysis of a company's environment is needed to determine if a 'fork-lift migration' (the entire environment is moved en masse) or 'segmented migration' (multiphase) is possible." In other words, will the company need to maintain a temporary site during the move for any unplanned events? This should always be paramount in the minds of data center managers who are beginning the move.

In addition, Aperture ([www.aperture.com](http://www.aperture.com)) Vice President of Product/Market Strategy Steve Yellen points to a general recommendation that data center managers effectively communicate throughout the entire move. If there is a break in communication and the virtual layout that was already approved is not being followed, issues will arise subsequent to its completion. A steady line of communication will allow data center managers to maintain significant control over the move and allow for on-the-fly decisions to

be made if problems should arise. All in all, communication is key.

While moving a data center, those who are executing it typically neglect a variety of items. Sometimes data center managers are focused so heavily on the move itself that they forget some of the most important factors involved in executing a total success.

### Old & New Differences

As Whitney says, keeping an inventory of products that are "checked in" and "checked out" is especially important: "Check-out and check-in processes at the old and new data centers, respectively, are immensely important. Some data centers have very strict policies (e.g., security might want to personally review and log the serial numbers of every device), which can be very time-consuming, and, if not planned for, might prohibit you from adhering to the migration timeline." Simply put, data center managers must be keenly aware that checking products, while a useful sanity check, can be overdone and create unforeseen issues.

Realizing that a new data center site is not the old site is especially important for the successful completion of a move. Yellen notes, "Most organizations are so focused on the move itself, they forget to think about the operational plan in the new data center. Organizations are building new multimillion-dollar facilities and running the operations the same way they did in the old data center. In these cases, entropy will take over, and they will

eventually be in the same boat as they were before."

In order to curb that common practice, Yellen recommends "evaluating processes and determining which ones are in need of modification in order to achieve the operational improvements [data center managers] are looking for in the new facility."

While focusing on the more prominent components in moving a data center, many IT managers forget some of the more obvious necessities for the new data center. For example, data center managers should



always determine if the mounting shelves and rails are compatible with the new data center. If the sites are quite different in scope and advancements, the old mounting devices may be rendered useless. Along those lines, managers should also be aware that extra network patch cables are always handy when making the move.

According to Whitney, data center managers often do not consult build documentation prior to the data center move. He says managers should "prepare and review build documentation (rack, network cabling, and power cabling) before the commencement of the migration." Without such consultation, a manager may find herself in the middle of the migration without a solid understanding of the entire process.

### Preserve & Insure

Although it's doubtful that anything will happen to equipment during the move as long as it is properly packaged and stored, one of the most critical times to preserve

the integrity of equipment is during the de-racking and reracking stages. During these times, the equipment is most susceptible to damage, and managers should give extra attention and care for the preservation of its integrity.

Perhaps the best advice for any data center manager for the preservation of the integrity of equipment is to buy insurance from the migration company. As Whitney explains, "Every legitimate IT services company carries liability insurance. However, liability insurance will not cover the replacement of a customer's damaged hardware if the damage occurs while the hardware is in the possession of the services company."

Regardless of the tactics employed during the migration of a data center, the true responsibility lies in the hands of the data center manager. As an expert, a data center manager is uniquely qualified to make a data center move seamless. And while most moves succeed, there are still issues that can arise and items that the manager may have forgotten during the stressful preparation. And it is for this reason that an SME should choose a reputable IT services company for the successful migration of a data center. (For more information on choosing a moving company, see "Finding Help When Moving Your Data Center" on page 12.) If data center managers stay on top of the migration through solid lines of communication and choose to follow the tips outlined above, the successful move of a data center can be relatively simple. □

## Quick Notes To Remember

- ✓ Communicate with the migration company and all other important individuals involved in the move.
- ✓ Remember rack-mounting issues and be aware that the old data center may not accurately reflect the new advanced data center.
- ✓ Prepare and review build documentation before the data center migration.
- ✓ Consider buying insurance, so equipment damage costs can be reimbursed.

If there is a break in communication and the virtual layout that was already approved is not being followed, issues will arise subsequent to the move's completion.

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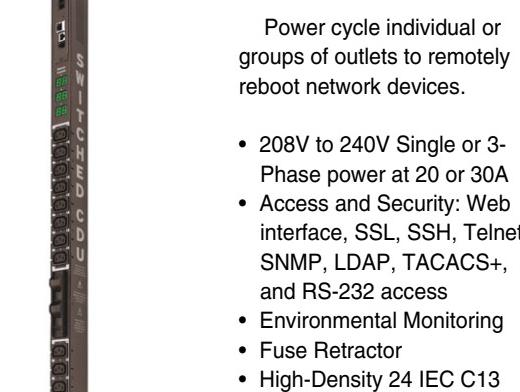
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# Finding Help When Moving Your Data Center

## Where Should You Turn For Assistance?

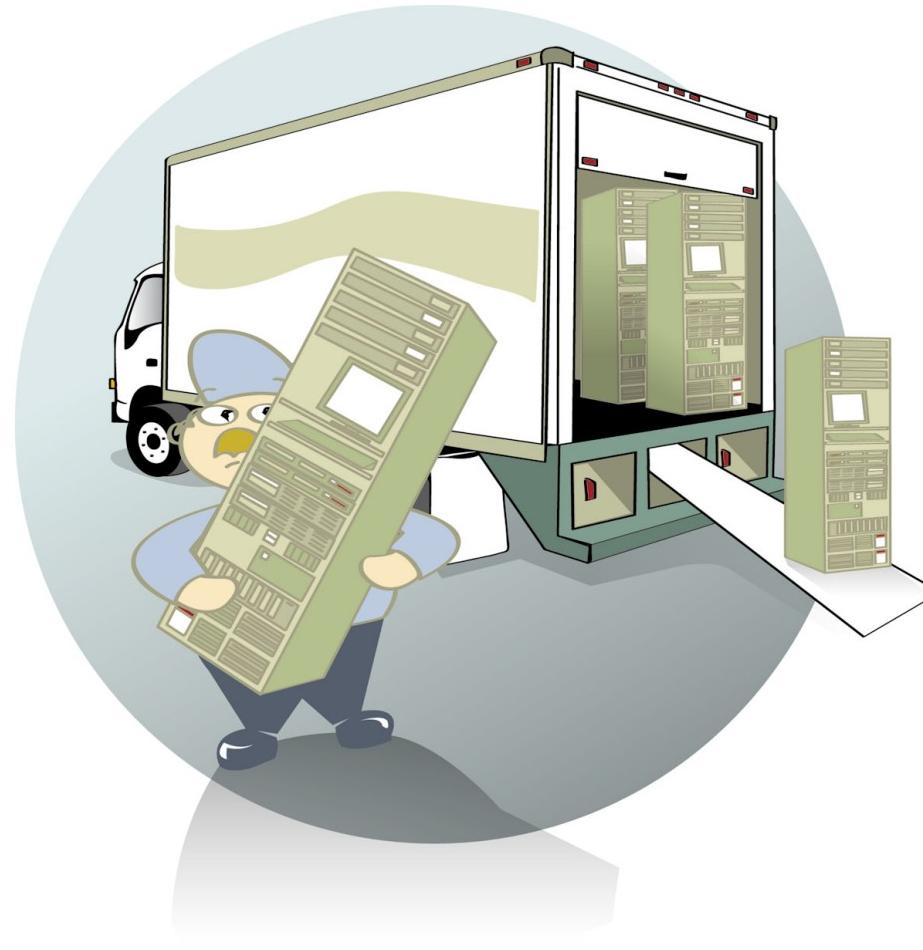
by Chris A. MacKinnon

**DATA CENTERS NEED TO MOVE** from time to time. But when you're moving, should you hire a moving company to conduct the move or have data center or IT employees do it? Some small to medium-sized enterprises might decide to go it alone, but if you choose to ask for help, how should you find and hire a company to help with the move? And what qualifications should you look for in a moving company?

### Hire or Go Alone?

Peter Sacco, president of PTS Data Center Solutions ([www.ptsdcs.com](http://www.ptsdcs.com)), says it's probably always better to hire someone. Sacco says, "It's like doing a plumbing project yourself. The tools needed to do the job most effectively are so specialized and you rarely have them, such that it would take you three times the amount of time to do the job vs. a professional. In the case of a data center move, the right packing materials, rigging equipment, trucks, containers, etc., are all vital to a job well done."

Clay Whitney, president and CEO of DataMove ([www.datamove.net](http://www.datamove.net)), says IT managers should ask themselves three important questions when planning a data center move: 1) Can my staff handle their day-to-day responsibilities while performing this additional work? 2) Can I afford to outsource this project? 3) Can my staff do a professional-quality job? Whitney says regarding a data center migration, an IT manager also needs to consider the allow-



relocate equipment. Authorized service providers are the OEM employees or companies that have direct contracts with the OEM to provide field services on their behalf. Violation of these contract provisions may result in the client paying time and material charges for any repairs."

Additionally, Latala says an OEM has the right to put the client under an observation period, in which no repair will be covered,

## Choosing a moving company that is tried, tested, and true is the key.

able downtime and whether the staff has the experience to keep the migration within that time frame.

Fred Latala, director of data center relocation services at Forsythe Solutions Group, says when moving a data center, SMEs need to be aware of the implications of their OEM warranties and maintenance contracts. Latala says, "All major manufacturers have specific terms in their warranties and maintenance contracts that require an authorized service provider to

and may also charge a recertification fee. He says for these reasons it's best to engage a company that specializes in data center relocation to help avoid these pitfalls.

### Finding & Hiring

So how do you go about finding and hiring a company to help with the move? Whitney says most IT managers and CIOs have a personal network of other professionals in IT. He says, "Ask around. Or, if your company is moving into a third-party

data center, ask them if they have a relationship with a migration services company. Alternatively, find a data center migration company by doing a Web search for 'data center migration' (for example)."

In Latala's opinion, choosing a moving company that is tried, tested, and true is the key. He notes, "Make sure the company you choose has all the necessary authorizations, extensive experience (has moved at least 100 data centers), and a proven track record of satisfied customers. Third-party analysts like Gartner or Forrester can be of help in identifying viable providers."

Can you just hire any moving company in your area? The answer to this question is a resounding "No." Sacco says, "Every area has a company that specializes in relocating computer equipment. They can be found in the yellow pages or by using search engines. But be sure to ask for (and check) all references. The bigger the companies they work for, the better they usually are. But not always."

Latala and Whitney would agree that you can't hire just anyone. Latala says, "Absolutely not. OEM warranties and maintenance contracts require specific

types of packaging and transportation for equipment."

Whitney adds, "It's the same as when an IT manager uses any IT services company; you first need to speak with them about their experiences (and get customer references, as well)."

### That Special Thing

As far as special qualifications you should look for in a moving company, Whitney says the first question an IT manager needs to ask regarding a data center migration services company is: What exactly do I need them to do for us? He says, "If the answer is 'everything,' then make sure you hire a company that can do everything. If all you need is to have a company pick up servers and deliver them to a loading dock at your new data center, then maybe all you need is to hire a trucking company (as long as they have experience moving servers)."

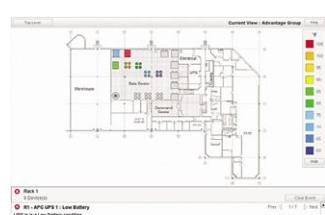
All things considered, Latala says the move event should be the culmination of the planning effort. He adds, "Do not underestimate the attention to detail and diligence in defining tasks, resources, budgets, and contingencies. Thorough analysis and detailed planning can be the difference between a successful relocation and a significant business impact." □

## Data Center Project Moving Teams

Peter Sacco, president of PTS Data Center Solutions ([www.ptsdcs.com](http://www.ptsdcs.com)), says in some cases, small to midsized enterprise employees can move a data center on their own, but most should call in the professionals. However, he says, a moving company is only one part of the integrated team for an effective move. Sacco says a data center project moving team should include:

- Internal IT staff
- Internal facilities staff
- An overall project manager (internal or external)
- A moving company for the physical packing, transport, and rigging
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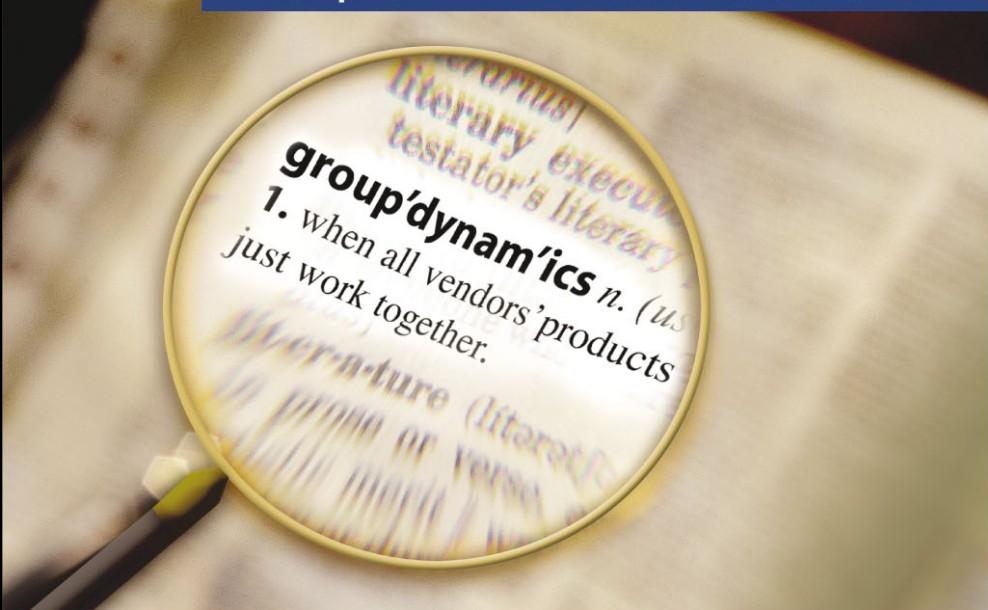
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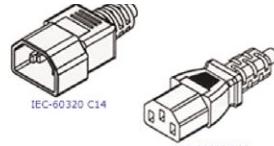


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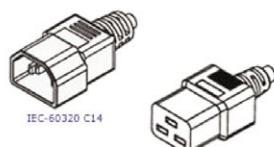
PRC0307

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Power - Wiring - Rack

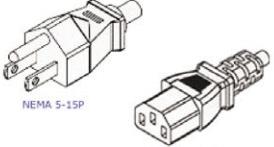
AC Power Cord IEC 60320  
C14 Plug to C13 Connector  
250v Black



AC Power Cord IEC 60320  
C14 Plug to C19 Connector  
250v Black



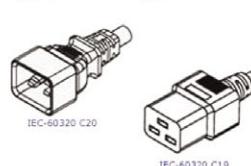
AC Power Cord NEMA 5-15P  
Plug to C13 Connector  
125v Black



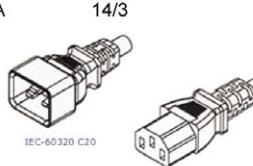
Item Length Amps Gauge

1540	8 inch	10A	18/3
4663	1.5 foot	10A	18/3
1736	2 foot	10A	18/3
7691	2.5 foot	10A	18/3
5413	3 foot	10A	18/3
1775	3.5 foot	10A	18/3
2965	4 foot	10A	18/3
1778	4.5 foot	10A	18/3
3262	5 foot	10A	18/3
9160	5.5 foot	10A	18/3
5612	6 foot	10A	18/3
3220	6.5 foot	10A	18/3
1228	7 foot	10A	18/3
2986	8 foot	10A	18/3
4671	1 foot	13A	16/3
4403	1.5 foot	13A	16/3
4670	2 foot	13A	16/3
4142	1 meter	13A	16/3
8037	4 foot	13A	16/3
2832	6 foot	13A	16/3
7365	1 foot	15A	14/3
4962	1.5 foot	15A	14/3
1965	2 foot	15A	14/3
7231	1 meter	15A	14/3
1529	4 foot	15A	14/3
7415	5 foot	15A	14/3

AC Power Cord IEC 60320  
C20 Plug to C19 Connector  
250v Black



AC Power Cord IEC 60320  
C20 Plug to C13 Connector  
250v Black



Item	Length	Amps	Gauge
2881	1 foot	20A	12/3
3101	2 foot	20A	12/3
2992	3 foot	20A	12/3
3002	4 foot	20A	12/3
7784	5 foot	20A	12/3
2928	6 foot	20A	12/3
1007	2.5 meter	20A	12/3
7995	3 meter	16A	12/3
3779	3 meter	20A	12/3

Premise Wiring

Power

Racks & Cabinets

## NETWORKING & VPN

AUGUST 3, 2007

# Move Toward IT Automation

KBOX™ Appliances For The Fortune 100,000

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**Comprehensive.** KBOX™ appliances preintegrate and deliver the functionality needed to solve IT automation challenges.

**Affordable.** KBOX™ appliances are priced with your network in mind. You'll find our pricing low relative to competitors, and there are no hidden costs.

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## Alert-A-Rack Safeguards Rack-Based Gear

**Information Support Concepts Product Detects Heat Or Humidity Buildup**

**ENVIRONMENTAL MONITORING** has been around for quite some time. But adoption numbers are growing rapidly as organizations seek a low-cost way to ensure high-dollar equipment isn't operating in conditions that could lead to catastrophic failure or drastically shorten its useful life.

Typically, IT installs sensors in the computer room, hooks up the cables, installs software, and begins gathering environmental data. ISC (Information Support Concepts) has simplified the process by combining server racks with monitors incorporated into the rack. The Alert-A-Rack Server Rack System gives advanced warnings via email when heat and humidity exceed predetermined parameters.

"The Alert-A-Rack provides the support and organization characteristics of a quality server rack cabinet combined with the ability to monitor two environmental factors inside the cabinet," says Jack Burlin, product manager at ISC.

Monitoring at the room level is not enough. While the temperature in the room may be fine—75 degrees Fahrenheit or cooler—one or two racks might be as high as 95 degrees Fahrenheit. If this remains undetected for a few hours, it's likely all that gear will have to be replaced.

The smart server rack system has an extruded aluminum frame with adjustable rack rails that can support rack servers from



Shown with optional components

### Information Support Concepts Alert-A-Rack

From \$1,012.25 to \$1,171.75, depending on rack size (22U, 36U, and 42U available)

Combines a quality server rack cabinet with two environmental monitors inside the cabinet

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[www.iscdfw.com](http://www.iscdfw.com)

 Information Support Concepts, Inc.

multiple vendors. The cabinet is designed to maximize airflow and has locking doors.

The two types of sensors included—heat and humidity—represent the vast majority of potential issues that IT may experience. Alert-A-Rack guards against conditions such as AC failure, dampness due to flooding, a server overheating, or leakage from sprinklers. If any of these conditions are detected, emails are sent to IT.

"Monitoring heat and humidity in individual server racks and cabinets has been an expensive proposition," says Burlin. "It was important to us that we develop a quality server rack cabinet that addressed correct airflow, proper sizing for servers, and an environmental monitoring system at an affordable price."

### Information Support Concepts Alert-A-Rack

From \$1,012.25 to \$1,171.75, depending on rack size (22U, 36U, and 42U available)

Combines a quality server rack cabinet with two environmental monitors inside the cabinet

(800) 458-6255

[www.iscdfw.com](http://www.iscdfw.com)

 Information Support Concepts, Inc.

## Mimosa NearPoint 3.0 Specializes In Email Archiving

**High-end Performance Enhancer For Microsoft Exchange**

**EMAIL IS THE MOST** mission-critical application for the majority of businesses today. Regulatory requirements for archiving email have added additional responsibilities on the IT staff in many organizations. Meeting these requirements typically requires some type of backup solution and offsite storage.

Mimosa NearPoint 3.0 delivers a solution that meets a number of specific needs for maintaining an email archive. Continuous data protection means every transaction is automatically saved for both disaster recovery and archival purposes. NearPoint 3.0 also implements a data capture method called Continuous Application Shadowing. This allows for the capture of Exchange log files the instant they are committed to disk. Off-host storage is used to prevent any corruption of the backup copy.

A new "crawler" feature searches and retrieves PST files from any machine connected to the network, based on administrator-defined policies. This makes it possible to archive email kept locally on users' machines. It also archives Exchange Public Folders, allowing auditors to search all content to re-create chain-of-custody for compliance and legal discovery purposes.

New performance enhancements, including a multinode grid architecture, allow Mimosa NearPoint to scale up to tens of thousands of mailboxes in a single system. The hot-plug modular architecture makes it possible to add or remove servers

or storage without breaking the logical consistency of the archive information.

NearPoint Self-Service Access search tools are available to all users in both Outlook and Outlook Web Access. This feature allows users and auditors to locate archived information quickly from public folders, offline PST files, calendars, contacts, and notes. An advanced eDiscovery Option adds additional features for the legal discovery process.

System requirements include Windows Server 2003; SQL Server 2000 or 2005; or Microsoft Exchange 2000, 2003, or 2007. Mimosa NearPoint 3.0 meets all the needs for any organization looking to comply with email archival regulations.

### Mimosa NearPoint 3.0

\$40 per mailbox for the base platform (2,000-mailbox minimum); options including eDiscovery, Disaster Recovery, and PST Archiving are available at a nominal per-mailbox charge

Provides continuous data protection and archival and storage management; performance enhancements allow it to scale up to meet the most demanding email apps

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 MIMOSA SYSTEMS

## Network Infrastructure Survival

**CPI's N-Series TeraFrame™ Network Cabinet Designed To Meet Cisco's Third-Party Specifications For 6500 & 9500 Switches**

### The N-Series TeraFrame™

Network Cabinet from Chatsworth Products Inc. (CPI) is engineered to solve thermal challenges associated with network switches using side-to-side airflow in a hot aisle/cold aisle layout. By employing CPI Passive Cooling™ Solutions, the N-Series TeraFrame serves as a complete and cost-effective solution for high-density applications, involving no active components to increase energy and maintenance costs or compromise redundancy, while decreasing total cost of ownership.

When deploying switches with side-to-side airflow, the N-Series TeraFrame can be equipped with CPI's Network Switch Exhaust Duct. The exhaust duct removes hot air by isolating and redirecting it out the back of the cabinet and into the hot aisle, minimizing hot air recirculation and essentially converting side-to-side airflow into a front-to-rear airflow pattern. By running the entire height of the cabinet, one Network Switch Exhaust Duct can support exhaust for up to three network switches and provides freedom to organize and move equipment as needed.

Available in 10 heights and 11 depths, the N-Series TeraFrame offers the most comprehensive choice for supporting network switches inside enclosures, while also presenting advanced cabling solutions.

**Remove hot exhaust air.** Isolate and redirect exhaust air into the hot aisle.



**Maximize energy efficiency.** CPI Passive Cooling Solutions involve no active components and decrease TCO.

**Supports hot aisle/cold aisle layout.** Proper room design and airflow management allows network and server cabinets to sit next to one another.

**Extra cable capacity.** Offset doors and side panels provide more interior space.

**Easy cable access.** Cables route around the frame for easy access.

**Simple RMU organization.** Cable guides and management spools divide and organize cables.

CPI's N-Series TeraFrame meets third-party specifications for Cisco® 6500 and 9500 switches and provides the ultimate network cabinet solution. To personalize the N-Series TeraFrame, go to [www.chatsworth.com/configurator](http://www.chatsworth.com/configurator).

### CPI N-Series TeraFrame Network Cabinet

A network cabinet designed with airflow and temperature control considerations in mind

(800) 834-4969

[www.chatsworth.com](http://www.chatsworth.com)



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**"Bringing iSCSI Into Focus"**  
a white paper by  
analyst Mark Ferelli

## Built For Performance



Disappointed with a lack of performance in your current iSCSI or Fibre Channel-based storage? iStor Networks, Inc. is in a class of its own, providing the System 2 Solution high-performance iSCSI IP Storage.

### iStor Delivers iSCSI

iStor found inspiration when it created the highest performance, up to 1160 MB/s, and most robust iSCSI products. The resulting solutions provide companies with the ability to overcome technology and total cost of ownership limitations in DAS, SAN, and NAS environments.



GigaStorATX™



i325

### The System

Fully-integrated GigaStorATX 1GbE and 10GbE controllers conform to the ATX form factor specifications, providing a cost-effective performance-based iSCSI Storage System.

### The Solution

For VAR's and System Integrators that require a vendor-provided enclosure, iStor offers the i325 Solution. The i325 includes the GigaStorATX System supporting eight ports of GbE or a single 10GbE for iSCSI connection, with capacity for up to 15 customer-supplied high-capacity sATA drives.

When it comes to high-performance, feature-rich, and cost-effective iSCSI RAID storage, iStor Networks solutions

should be on your evaluation short list.

iStor offers you the balance of price and performance that makes iSCSI IP Storage an obvious "YES" decision for organizations of all sizes or sophistication.



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### Currently Enrolling

### iStor-inAbled™

### Partner Program

Contact iStor at [info@istor.com](mailto:info@istor.com)

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## Product Releases

### CLIENTS

■ The PANEL6100, a 10.4-inch, ultra-slim LCD monitor from **Axiomtek**, supports a wide array of broadcast signals for industrial-grade monitoring appliances. DVI, VGA, S-Video and Video interfaces are compatible. The PANEL6100 features a NEMA4/IP65-compliant front bezel along with a screw-type adaptor plug and 12/24V DC-In power supply. The monitor is compatible with panel, wall, and rack mounting as well as VESA FPMPMI (Video Electronics Standards Association Flat Panel Monitor Physical Mounting Interface).

Axiomtek also announced the GOT-3840TL touch-panel computer for advanced communication and industrial applications. It features an 8.4-inch SVGA color resolution 800 x 600 TFT LCD as well as an anti-vibration design for vibrations of up to 500Hz. The fanless GOT-3840TL also has ultra-low power consumption and supports an optional WLAN antenna.

■ **BenQ** released the E series, its new line of LCD monitors. With 13 different models, the E series is geared toward high-performance home and business applications with an emphasis on value. The LCD monitors feature a variety of presets for specific usage occasions that include Standard, Dynamic, Movie, Photo, and sRGB modes. All E series models come equipped with a speaker bar that hangs from beneath the monitor, up to a 170-degree viewing angle, 5ms response time, and LED ambient illumination. Screens come in a variety of ratios from 4:3 to 16:10 widescreen. All BenQ E series monitors are Energy Star certified.

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■ **Business Objects** released its Crystal Reports Viewer XI, which is a standalone RPT file viewer that lets users open, explore, and view Crystal Reports documents. Crystal Reports Viewer XI also lets users create and save customized report views to help them find and refer back to the data they need quickly and efficiently. The utility also lets report designers create a single document for all who need access to the report data. Business Objects is offering the Crystal Reports Viewer XI in 12 languages, free of charge, to facilitate the distribution of reports between all who need to see the data.

.....

■ **EnterpriseDB** announced EnterpriseDB Postgres, a distribution of the pre-configured and certified binary PostgreSQL database for Linux that helps customers with enterprise deployment. EnterpriseDB Postgres includes a one-click installer that delivers the most commonly needed PostgreSQL components and add-ons for major operating systems, including the ability to run applications written for Oracle unchanged, EnterpriseDB Replication Server, and GridSQL for EnterpriseDB Advanced Server. Enterprise DB also announced the EnterpriseDB Postgres Resource Center, a community-based Web site for enterprise application developers and DBAs. This center provides free downloads of EnterpriseDB Postgres and serves as a repository of technical information, tools, and other PostgreSQL resources. The site also hosts community-based forums.

EnterpriseDB also unveiled the new GridSQL for EnterpriseDB Advanced Server, which lets users leverage clusters of inexpensive commodity servers with OLAP

applications, while it appears as a single database to the applications. This allows organizations to meet complex data warehousing and business intelligence challenges at a lower cost than other solutions. Management is made easier by a suite of graphical management and monitoring tools that allow DBAs to monitor the whole grid from one console. The GridSQL also uses true grid technology to distribute data and share computing resources at the database layer, which allows existing applications to run unchanged while developers create new applications as if they were using a single database on one server.

### MESSAGING & TELEPHONY

■ **Nuance Communications** announced Nuance Voice Control for BlackBerry 8800 series smartphones from IM, including the BlackBerry 8800 from AT&T and the BlackBerry 8830 from Sprint. Nuance Voice Control is a subscription-based, one-click mobile search and messaging application that is driven entirely by natural voice commands. It's integrated with the built-in GPS of these BlackBerry smartphones, making Nuance Voice Control the first location-based mobile voice search application that uses natural speech as its input mechanism. Users can conduct location-based business searches (411) and receive driving directions using voice destination entry. They can also dial a contact, dictate email and text messages, or create calendar appointments using spoken commands. BlackBerry 8800 series users can download Nuance Voice Control directly from their mobile devices by visiting [www.nuancevoicecontrol.com](http://www.nuancevoicecontrol.com).

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■ **TalkSwitch Call Reporting**, the latest telephone reporting system from **TalkSwitch**, provides users the opportunity to generate reports on all calls coming into a system. Information such as call volume, traffic, duration, as well as the number of callers waiting on hold and unanswered calls, can be used by admins to accurately bill clients for telephone charges. It also allows them to monitor real-time call activity of a department. TalkSwitch Call Reporting is available in Advanced and Premium packages for \$499 and \$699, respectively.

.....

■ **Tandberg's Video Communication Server** supports both SIP and H.323 in its call control and firewall traversal applications. The multi-application network device includes a call forwarding program called FindMe, which, Tandberg says, provides personalized, unified business communications. FindMe offers "one number access" to users, who can easily route their calls to multiple devices from a single number.

### NETWORKING & VPN

■ **Agilent Technologies** has enhanced its Mobile WiMAX Test Set, Signal Studio, and VSA (Vector Signal Analyzer) products. All three can now help users test WiMAX Forum Wave 2 system profiles. The products can test MIMO and other Wave 2 profile functionality, letting users perform comprehensive testing of Mobile WiMAX. The Agilent E6651A Mobile WiMAX Test Set provides base-station emulation and measures UL signals without external equipment. The product includes such Wave 2 enhancements as support for operating with

*Go to Page 17*

### NETWORKING & VPN

AUGUST 24, 2007

# Concerned About Application Performance, Network Authentication & Guest Access?

**A10 Networks IDaccess & AX Series Provide Industry's Best Price/Performance**



The A10 Networks AX Series accelerates applications, now with models for enterprises and data centers of all sizes.



IDaccess eases the burden on IT administrators by centralizing authentication for both guests and employees.

**TWO NEW PRODUCTS** from A10 Networks are designed to provide reliable, cost-effective options for enterprises looking to accelerate and secure their applications.

#### IDaccess: Authentication & Guest Access

IDaccess is a family of purpose-built, security-hardened 1U appliances that integrate RADIUS, DHCP, Guest Access, and A10's unique IP-to-ID Service. The appliances provide the industry's most cost-effective, integrated network authentication and guest network access solution in their class.

The IDaccess appliances support comprehensive authentication methods and an array of back-end servers. By combining authenticated DHCP with a guest access portal, network administrators have a powerful and flexible network management tool to support all network and guest authentication needs.

IDaccess eases the burden on IT administrators by centralizing authentication for guests and employees, while ensuring guests can only access the resources they need.

**Guest Access.** Provides a user-friendly and intuitive interface that lets front desk personnel create and manage guest accounts. IDaccess supports authentication for both internal users and guests in a single appliance, eliminating the need to manage multiple devices.

based reports, logs, and alerts for all authentication functions.

#### AX Series: Next-Generation Server Load Balancer

A10 Networks' AX Series is the industry's best price/performance application acceleration switch, helping enterprises maximize application availability through a high-performance and scalable application delivery platform.

The AX's ACOS (Advanced Core Operating System) architecture has garnered the company numerous awards and is revolutionary by market standards because of its native multisystems support, which includes an optimized multi-CPU architecture built from the ground up designed for performance, scalability, and reliability.

The AX's ACOS architecture scales performance across multiple decoupled CPUs and specialized programmable ASICs linearly to ensure maximum scalable performance, including when all of the features are turned on. The AX Series' aRule Advanced Scripting technology provides ultimate policy creation flexibility to deliver rich traffic inspection and switching capabilities, helping organizations adapt to ever-changing conditions and application types.

The two newest AX Series appliances, 2000 and 2100, are 2U appliances de-

signed for enterprise data centers and server farms. The AX 2000 has two CPUs, 2GB of memory, eight Gigabit over copper ports, two G small-form factor pluggable fiber ports, and an 80GB hard drive. The AX 2100 has those same components, plus an additional two CPUs and two G small-form factor pluggable fiber ports; the 2100 also has dual 80GB RAID 1 hard drives.

All AX models feature carrier-grade hardware components, the industry's best SSL acceleration and L4-7 acceleration, support for IPv4 and IPv6, and an industry-standard command-line interface and easy-to-use GUI.

#### Key benefits:

- Improves user application response times
- Tuned for multiple CPUs with multiple cores
- Provides Five 9s reliability for accelerated applications
- Scales server farm capacity with advanced server load balancing
- aRule scripting language future-proofs against changing business requirements
- Provides best price/performance per watt in a compact 2U form factor

#### A10 Networks IDaccess & AX Series

The AX Series is the industry's best price/performance application acceleration switch; IDaccess is a family of integrated network authentication and guest access appliances

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[www.A10networks.com/processor](http://www.A10networks.com/processor)



## Product Releases

*Continued from Page 16*

DUT in MIMO modes and DL, SM, STC, and UL MIMO measurements.

The Agilent N7615B Signal Studio and 89601A VSA products offer new testing capabilities, such as analysis for Wave 2 system profiles and support for physical layer signal generation. N7615B Signal Studio can create 802.16e waveforms. The N7615B Signal Studio software is now available, 89601A VSA will be available next month, and the E6651A Mobile WiMAX Test Set will be available by the end of this year.

■ **Blade Network Technologies** introduced its 10 Gigabit Ethernet switch designed to be used with the HP BladeSystem. The switch is ideal for data centers and organizations using bandwidth-intensive applications, such as computing clusters, VoIP/IP PBX, VOD/IPTV, video surveillance, gaming, videoconferences, server virtualization, data/voice/video hosting, Web 2.0 services, next-generation networks, security, firewalls, and backup and disaster recovery. Features and capabilities include 400Gb full-duplex bandwidth; wire-speed Layer 2/3 switching on all ports; Layer 3 routing; Virtual Router Redundancy Protocol; support for up to 1,000 VLANs; included BladeHarmony software; and RADIUS, TACACS, and TACACS+ authentication.

■ **CA** launched updated versions of CA InterTest, CA SymDump, and CA InterTest Batch, which let users test and troubleshoot mainframe applications and Web services. The software is ideally suited to SOA environments. CA InterTest and CA SymDump, designed for IBM's CISC (Custom

omer Information Control System) r8, employ the CICS Transaction Server release 3.2, which lets users integrate traditional mainframe transactions and Web-based applications into the SOA environment. The utilities also feature debugging and fault analysis capabilities. CA InterTest Batch now supports nested DB2 stored procedures to assist developers in debugging code. CA's updated offerings are all fully supported by the rest of CA's management product portfolio.

CA also unveiled the newest version of its Unicenter Service Catalog, which lets IT managers define and deliver IT services in terms that business decision-makers can understand. Unicenter Service Catalog r11.2 tracks users requesting and consuming resources and logs the frequency of those requests to make sure the given allocations are appropriate. New features include an intuitive Web-based interface, custom forms, and template workflows. CA also released its Unicenter Service Accounting r11.2, which tracks the consumption of IT resources and generates reports that reflect cost data. The offering fully supports the best practices recommendations found in the recently published ITIL v3.

■ **Moxa** released a gigabit media converter, called IMC-101G, which offers industrial-grade conversion between a 10/100/1000BaseT(X) connection and 1000 BaseSX/LX/LHX/ZX. This allows users to extend the distance between copper-based connections with fiber-optic cables. The IMC-101G has an open SFP slot that allows users to plug in the appropriate SFP optics to suit a variety of applications and it can extend transmission distance up to

80km (with single-mode fiber) at a transmission speed of 1,000Mbps. Each IMC-101G converter comes with Link Fault Pass-Through to assist with troubleshooting broken links. In addition, the IMC-101G has a relay output warning alarm to help prevent damage and loss, supports redundant power inputs, and has a casing that is IP30-rated. The standard IMC-101G models support an operating temperature range of 0 to 60 degrees Celsius, and the wide-temperature models can be used in a temperature range of -40 to 75.

■ **Novell** has introduced its ZENworks Orchestrator 1.1 management solution, the latest version of its data center management solutions. The ZENworks Orchestrator uses a modular approach, allowing the high-level orchestration engine to be installed and run separately from more specialized management components, including virtual machine management. It's an improved feature set that includes a new user interface and full life cycle management. A SUSE Linux Enterprise from Novell, running Xen virtualization for the ZENworks Orchestrator, is also available, presenting a low cost and less complex alternative for an organization's IT infrastructure.

■ **Oracle** has released the preview of Oracle Authentication Services for operating systems, which is a new product within the Oracle Identity Management and part of the Oracle Fusion Middleware. The Oracle Authentication Services application is designed to make Linux deployment easier and faster for users with a preintegrated configuration, centralized user authentication, and storage solution for Linux and Unix. Featuring a secure, efficient means

for user authentication, it allows administrators running Linux to use existing graphical and command-line user management tools in order to manage users. This lets administrators create new processes for everything from adding a user to changing a password.

■ **Stampede Technologies** showed its Multi-User Client software at LinuxWorld. The company says the software is the first solution from a WAN optimization and acceleration maker to offer enterprises an alternative to installing and administering costly hardware at remote locations or through deploying client software on every remote service. The software can run on existing Linux-based servers at remote offices and can work in tandem with Stampede's Application Acceleration Series data-center appliance, providing full bi-directional acceleration and bandwidth optimization for remote users. The product uses such performance-enhancing technologies as TurboStreaming, Advanced Virtual Pipelining, SSL Client-side Termination, Intelligent Cache Differencing, Image Transformation, Content Pre-Caching, Connection Management, and Load Balancing. Deployable on Windows- or Linux-based servers, the software starts at \$45 per client.

■ **XenSource** announced the release of XenEnterprise v4, the latest permutation of the XenEnterprise product line of virtualization deployment software. Based on the Xen open-source virtualization platform, XenEnterprise v4 is designed to be cost-effective and easy to use yet operate at enterprise-class levels. Features include

*Go to Page 18*

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- N+1 Redundant Configuration
- Meet 1U Rackmount System

#### N+1 2U Redundant EFRP-2553G



- 550+550 watts Output Power
- Support to Dual Nocona Processors
- N+1 Redundant Configuration
- Meet 2U Rackmount System

#### N+1 3U Redundant EFRP-3300SG



- 600W+300W Output Power
- N+1 Redundant Configuration
- Meet 3U Rackmount System

#### N+1 4U Redundant EFRP-3300G



- 600W+300W Output Power
- N+1 Redundant Configuration
- Meet 4U Rackmount System

#### PSII Type 1+1 Mini Redundant Power Supply EFRP-2462G



- 460+460 watts Output Power
- 1+1 Redundant Configuration
- PSII Mini Redundant Power

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# Who's Watching Your Data Center Environment?

**AVTECH's Room Alert 26W Simplifies Monitoring Of Temperature, Humidity, Power, Flood & More**

WHEN IT COMES TO the data center environment, the most common problems encountered are air conditioning and power failure. Air conditioning failure can lead to high temperatures, high or low humidity, and water flooding. Power failure can lead to costly network, server, and Web site downtime, not to mention the cost to replace or fix expensive servers and systems. Extreme temperature changes due to failed heating or cooling equipment, malfunctioning components, or even seasonal



changes can damage hardware, threaten uptime, block network access, destroy data, and be expensive to recover from.

AVTECH Software's Room Alert 26W safeguards your valuable equipment by alerting staff when environment changes occur. Room Alert 26W monitors rooms ranging from small unmanned phone or wiring closets to large corporate data centers. And the Room Alert WiSH (Wireless Sensor Hub) sensors are battery-powered and communicate directly with the main unit, so the Room Alert 26W can monitor virtually anywhere, indoors and out, up to 250 feet away.

With the Room Alert 26W, situations that could lead to expensive recovery can be addressed quickly and before they cause damage, downtime or lost revenue.

## Easy To Use

Room Alert 26W is an easy to use solution that does not require a host PC to operate. Simply plug Room Alert 26W into your network via Ethernet and then place WiSH sensors and other external sensors in the desired locations. You can

### What's Included With The Room Alert 26W

#### Standard options with the \$1,195 package:

- Room Alert 26W 1U 19-inch rack model
- Built-in digital temperature sensor
- Built-in digital humidity sensor
- Built-in main power sensor
- Built-in flood sensor (just add cable)
- One external digital temperature sensor
- One external room entry sensor
- Six external digital sensor ports
- 16 sets of switch sensor contacts for connection of additional external environment sensors
- Built-in UPS
- One WiSH (Wireless Sensor Hub)
- PageR 20 Object Enterprise software license
- Power adapter, 10-foot Ethernet cable, printed and PDF documentation, CD media, and Getting Started materials

#### Additional options include:

- External digital sensors for temperature/humidity, temperature, and power
- External switch sensors for temperature, humidity, power, flood, smoke, motion, sound, light, air flow, room entry, and more
- PageR Enterprise software license upgrades
- International plug adapter

### AVTECH Room Alert 26W

\$1,195

An advanced hardware solution for monitoring computer room temperature, humidity, power, flooding, and much more in multiple locations

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## Product Releases

*Continued from Page 17*

function for migration of running virtual machines; scalable, resilient virtual infrastructure managing; and support for 32- and 64-bit workloads. XenEnterprise v4 will cost \$1,599 per dual socket for an annual subscription and \$2,499 per dual socket for a perpetual license.

### PHYSICAL INFRASTRUCTURE

■ **Minicom Advanced Systems** launched the Serial RPS (Remote Power Switch). Seamlessly connected to Minicom's IP Control through serial capability, the Serial RPS allows the user to power on, power off, and reboot up to 128 remote connected servers using the same client interface used to access and control them. The preconfigured plug-and-play device ensures an easy installation.

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■ **Tripp Lite** has released four new SmartOnline 3-Phase UPS systems that include the smallest footprint for cabinets in their class, according to the company. Tripp Lite has combined power and battery components into one compact module to save floor space. Additionally, front-panel battery access is designed to simplify runtime scalability. Tripp Lite says the systems offer mission-critical equipment for computing, networking, telecommunications, VoIP, and industrial work areas. Further, the systems have true online, double-conversion operation and IGBT technology that offers less than 3% total harmonic distortion. Other features include 120/208V hardwire input and output, a static bypass and manual maintenance bypass for continuous availability, and an internal battery system that can be extended by installing more optional internal battery packs through the front access door. Systems are available in 20kVA and 30kVA (SU20K3/3 and SU30K3/3) base models and extended runtime models (SU20K3/3XR5 and SU30K3/3XR5).

### SECURITY

■ Novell eDirectory users now have two new biometric login kit options from **Fujitsu** and **123ID**. The former provided the fingerprint-sensing hardware, namely the MBF200 single-touch sensor and MBF320 Sweep Sensor, and 123ID supplied the biometric software. The result is a replacement for password authentication on Linux, NetWare, or Windows systems.

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■ **PineApp** has released details concerning its Mail-SeCure security technology, which it says offers a first line of defense against spam, regardless of email content. The technology uses 11 proactive antispam engines and five antivirus engines that include real-time components. Additionally, the security system offers defense against existing and emerging threats, recognizing email threats in any form and blocking them before they reach the network. PineApp says Mail-SeCure blocks threats instantly, meaning dependency on adding new filters, signatures, and software upgrades is eliminated. The company says Mail-SeCure protects users against targeted and nontargeted email-related threats, creating a buffer between the Internet and an organization's email system via security layers.

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■ **Sendmail** announced a new appliance that protects inbound and outbound messaging for security-conscious businesses. The Sendmail Sentri MP (Message Processor) is a single-box appliance that offers message protection and lets users create custom controls and policies. The appliance sits inline on the network and

replaces single-purpose messaging gateways because it handles both inbound and outbound traffic. On the inbound side, it handles message authentication, filtration, and scanning, while its outbound duties include monitoring content and enforcing policies. The appliance also handles intra-company Microsoft Exchange environment offloading, as well as mail encryption, and according to Sendmail, the appliance does not impact network performance. It includes a Sendmail MTA (Mail Transfer Agent) and DKIM (Domain Keys Identified Email) and offers policies for compliance workflows, information protection, and acceptable use situations out of the box. Sendmail's new Sentri MP appliance also lets users manage policies by country, region, and business unit, among other categories, all from a central location. The Sentri also features role-based access controls and includes a dashboard that handles incident remediation and drill-down reports.

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■ **Sunbelt** announced the launch of an anti-spam filtering engine, the Sunbelt Advanced Spam Filter, to Ninja Email Security 2.1 for Microsoft Exchange. The Spam Filter scans incoming email messages for suspicious misspellings and other spam-unique characteristics, while detecting new spamming tricks such as embedded content, HTML, and foreign-language spam. The filter creates a database of the spam to further block emails containing spam in the future. Sunbelt offers a 30-day trial version of Ninja Email Security 2.1, which starts at \$184.95 for five mailboxes.

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■ Antispyware provider **Webroot** is rebranding its security software for the enterprise. Webroot AntiSpyware Corporate Edition with AntiVirus features Active Directory integration, Vista compatibility, and Behavioral Genotype antivirus protection from Sophos. Webroot Anti-Spyware Corporate Edition with AntiVirus replaces Webroot SME Security 3.1 in the lineup, just as Webroot AntiSpyware Corporate Edition replaces Spy Sweeper Enterprise 3.0. Existing users can upgrade at no cost.

### SERVERS

■ **Dell** announced the availability of the Red Hat operating platform and middleware on Dell PowerEdge servers to help customers migrate from legacy application infrastructures to open-source and standards-based hardware. Customers can also choose either a Windows or Linux operating system to best fit their needs. The Dell/Red Hat offering features three different options. The JBoss Enterprise Application Platform combines the JBoss Application Server, Hibernate, and JBoss Seam with Dell hardware and the customer's choice of Linux or Windows. The Web Application offering combines the Red Hat Application Stack, including the JBoss Enterprise Application Platform and Red Hat Enterprise Linux, with Dell hardware. The Web Edge solution combines Red Hat Enterprise Linux and Dell hardware.

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■ **IBM** has announced its integrated, blade server-based data virtualization offering, the Information Server Blade. In order to increase business insight and manage growing information overload problems, the Information Blade Server supports rapid data movement to deliver a consolidated, enterprise-wide view of information and is prepared for all kinds of data integration projects, such as consolidations, mergers and acquisitions, business intelligence, or data warehousing. In order to access and

## Product Releases

translate large quantities of information stored across an enterprise, it also includes flexibility of blade computing and virtualization technologies. Additionally, the IBM Information Server Blade has proven it can provide performance improvements and cost savings.

### STORAGE

■ **agámi Systems** released the agámi Information Server AIS1006, an enterprise-class unified storage system that includes 6TB of storage capacity. The AIS1006 features throughput levels of 300MBps and supports multiprotocol storage, including iSCSI, NFS, CIFS, NDMP, and SNMP. Other features include RAID 5 with parallel rebuild, environmental monitoring with call-home features, snapshots, and free live replication. The AIS1006 is compatible with VMware, Microsoft Exchange, and Microsoft SQL Server. agámi's architecture for network storage blends 64-bit Symmetric Multi-Processor technology, enterprise-class SATA drives, and HyperTransport I/O technology. For consolidated storage, the AIS1006 includes iSCSI and NAS host connectivity that enables concurrent block and file I/O through a management interface. Customers can also configure and manage the storage system over the Web-based interface.

■ **ATTO Technology** unveiled the ExpressSAS H380 and H308 SAS host adapters. The H380 and H308 models are direct-attached adapters that work with SAS and SATA II devices and can transfer up to 3Gbps per port. Designed for high-performance server environments and digital video applications, both adapters include x8 PCI-E technology, SAS speeds, and ATTO's Advanced Data Streaming Technology. The ExpressSAS H380 offers connectivity through two external x4 MiniSAS SFF8088 connectors; the H308 model utilizes two internal x4 MiniSAS SFF8087 connectors and supports up to 256 devices when connected through SAS Expanders. Each of the eight ports can deliver up to 300MBps, and the host adapters support Windows, Linux, and Mac OS X.

■ **Coraid** added to its EtherDrive Storage product line with the release of two SATA RAID appliances, the 16-slot SR1661 and the 24-slot SR2461. The storage devices can both transfer 500MBps over a 10 Gigabit Ethernet interface via the AoE (ATA-over-Ethernet) protocol. The appliances feature dual GigE ports and slots for up to 16 (or up to 24) 1TB hot-swappable SATA disks, all in a 3U rackmount chassis. The SR2461, which will be available late next month, is priced at \$10,995, while the SR1661, which is currently available, is \$8,995.

■ **DataCore Software** is offering trial versions of its thin provisioning storage virtualization software. Instead of using new hardware, DataCore's new software provides thin provisioning via a network-based service. According to DataCore, businesses can reduce expenses and environmental impact by using this software product instead of buying new hardware. The software publisher is targeting DataCore at small and midsized companies, as well as data centers. The software provides immediate storage capacity provisioning and works with most hardware, which means that the software can withstand major hardware upgrades. It balances capacity across multiple application servers and prevents application service disruptions. The DataCore thin provisioning software starts at \$1,000, or you can

download the 30-day trial version from DataCore's Web site.

■ **Emulex** will release an 8Gbps PCI Express-based family of products that includes LightPulse Fibre Channel HBAs (Host Bus Adapters) and an Embedded I/O Controller, all designed to provide security, data integrity, and virtualization abilities, plus provide backward-compatibility with existing 4Gbps and 2Gbps Fibre Channel SANs. The company says the LightPulse HBAs include SLI (Service Level Interface), which provides driver compatibility across all of Emulex's HBAs. Further, the products' speed-matching abilities let IT administrators seamlessly integrate 8Gbps connectivity into current Fibre Channel SANs. The product line also includes new LPe12000 HBAs, custom mezzanine cards for server blades, and the Emulex IOC 540 I/O controller. More information concerning LightPulse HBAs, slated for release this quarter, is available at Emulex's Web site.

■ **Mellanox Technologies** announced the general availability of the NFS-RDMA SDK (Network File System over Remote Direct Memory Access Software Development Kit) for its InfiniBand adapter products. The SDK supports the OFED (Open-Fabrics Enterprise Distribution) version 1.2 software stack and delivers 1.3GBps of read throughput and 600MBps of write throughput over a single InfiniBand link. Through the use of low-latency, node-to-node connectivity and low price and power per megabyte of available bandwidth, InfiniBand enables cost-effective scaling of both compute and storage capacity. Use of whitebox Linux-based commodity storage platforms, such as the MTD2000, can further reduce the capital cost of deployment.

■ **QLogic** is about to sample its first 8Gbps Fibre Channel switches and host bus adapters for OEM qualification, the company says. The new interface provides more headroom for high-speed storage networking traffic, and it's backward-compatible with existing 4Gbps and 2Gbps equipment. The company touts its "end-to-end" 8Gbps product line with director switches, edge switches, blade server HBAs, and single- and dual-port HBAs.

■ **STEC** is extending its Zeus-IOPS SSD (solid-state drive) family with the new Zeus-IOPS 3Gbps SAS and SATA interfaces. The 3.5-inch form factor SSDs include NAND flash memory and build upon the Zeus-IOPS with Fibre Channel interfaces. According to STEC, its Zeus-IOPS drives boast read access times of fewer than 20 microseconds and write access times of 60 microseconds. The drives support 24/7 operation and offer 250MBps for sustained sequential reads, as well as 200MBps for sustained sequential writes. They have 3Gbps SATA and dual-port SAS interfaces and include a five-year warranty. STEC plans to begin shipping the new drives in Q4 of this year.

STEC also announced the release of its Mach8 line of SSDs, designed to replace hard drives. Available in two versions—a high random read and write IOPS (Mach8-IOPS) version and the basic Mach8 version—these SSDs are designed to offer affordable, secure storage for enterprises. STEC touts enhanced performance as a hallmark of the SSDs, with access times measured in microseconds instead of the usual milliseconds and projected mean time between failures of 2.8 million. Mach8 SSDs can also be used for mobile computing and come in capacities of 8, 16, 32, 64, 128, and 256GB.

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The screenshot shows the Processor.com homepage with a prominent search bar at the top. Below the search bar, there are several categories listed under 'Find ALL New Product Information With ONE CLICK!'. These categories include Physical Infrastructure, Communications, End Nodes, Software, Services, and a 'Cover Articles' section. Each category has a list of sub-topics. At the bottom right, there is a 'Search Only:' section with links to 'Showcase Ads' and 'Editorial'. The overall layout is clean and modern, designed for easy navigation and search.

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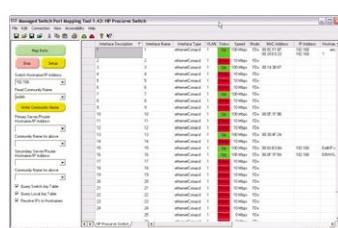
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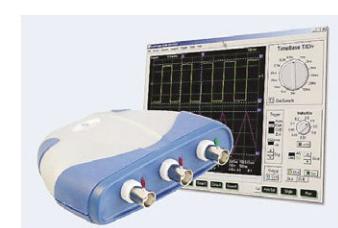
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## OPINIONS

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# Is IT Ready For Web 2.0?

Web 2.0 is a big deal. So big, in fact, that it's becoming difficult to write about it without sounding cliché. A catchall for everything beyond static HTML, Web 2.0 is a business model, a set of applications, a development platform, a software delivery mechanism, and an ideology.

### The Hype-O-Meter

Web 2.0 technologies democratize the creation and management of content and can have massive upsides for enterprises that make them work. Where Web 1.0 was characterized by static Web pages and transaction-based interactions, Web 2.0 is a complex beast that includes user-driven content, on-demand Web services, open platforms, and mechanisms for mass collaboration.

For the enterprise, this promises faster development and deployment, improved knowledge management, and lower training costs. Buzz words such as community, collaboration, contextual, and customer-focused are often used to describe the new Web.

So why is enterprise adoption of Web 2.0 so slow? Web 2.0 advocates are quick to blame corporate IT departments. They paint system admins as oppressive control freaks that deride user-driven IT. Some go so far as to suggest that IT leaders are close-minded, Microsoft-centric individuals that only think of the Internet as a security risk.

However, IT leaders aren't the only ones reluctant to give up their power. If Web 2.0 isn't catching on

in the enterprise, business units are also to blame. In many companies, the control issue doesn't relate to IT at all—it's the business leaders who don't want their staff "doing all this Web 2.0 stuff" instead of cranking out whatever widgets they're responsible for.

While there may be some IT shops with a "ban it" mentality, most simply don't have the power to stop Web 2.0. To the contrary, it's often the management hierarchy in the business units that rejects IT's attempts at upgrading collaborative infrastructure.

### Not Ready For Prime Time?

From a service delivery standpoint, how technology and information is accessed is less a concern than whether it meets the needs of users. In this regard, one question that remains is whether consumer-centric technologies do in fact meet business needs and should be encouraged in the enterprise.

Some Web 2.0 applications will simply not make the cut. Proving the value proposition before moving new technologies into

production is essential triage to ensure that IT efforts are not being wasted.

### Web 2.0 Is An Addition, Not A Replacement

We're far from a situation where the desktop OS will disappear. Even if users can easily develop and manage their own online tools and communities, IT will still be charged with cost-efficiently managing mission-critical infrastructure and applications. A Web services model isn't going to eliminate the role of IT; it will expand it. Consider the following top five implications for IT:

**IT plays a role in innovation.** Understand how Web 2.0 can be of use to the enterprise: Share this with executives, push for budget allocation to innovation, and provide a Web 2.0 "virtual sandbox" where users can test new collaborative technologies.

**Information management is a "must-have."** Collaboration is good, but sensitive business data is not something to be played with. The creation and sharing of unstructured data will only create value if IT can help manage, validate, secure, and control it coherently. As Web 2.0 expands, IT will also be pressured to improve metrics gathering, analysis, and reporting initiatives that help drive decision-making.

**Integration and support are key.** Pundits that tout Web 2.0 applications as "low-cost" obviously left integration and support out of their TCO models. While service-oriented architecture and Web services are supposed to make everything "play nice," integration with enterprise data and

legacy infrastructure is still a big challenge, as are application performance, scalability, and management. This is especially true for applications brought in surreptitiously via business users and thrown at IT to support.

**Security and compliance at the user level.** Enterprises sold on Web 2.0 are challenged with opening up to external business partners while minimizing risk and protecting intellectual capital. A critical component of this will be security at the user level. Unlike the familiar client-server model, many Web apps are accessed by individual PCs outside the enterprise's security perimeter.

**A world of perpetual beta.** Web 2.0 apps are iterative, with new functionality added continually. To succeed, enterprises have to become more agile. Some improvements will come from the user community, forcing IT to be more open to constructive criticism.

### We Can't Ban Everything

IT will constantly struggle to find a balance between letting employees use what they need to get the job done vs. locking everything down for security, support, and compliance. However, in the case of Web 2.0, business leaders are as much to blame as IT for the lack of adoption. Innovative companies will work on both fronts to help prove the value of collaborative Web technologies.

Web 2.0 is a buzzword, a business model, a set of applications, a development platform, and an ideology. But for IT, Web 2.0 can be a big headache, especially since collaboration and peer participation can't be forced on business users that don't want it. In this case, even if you build it, they may not come. □

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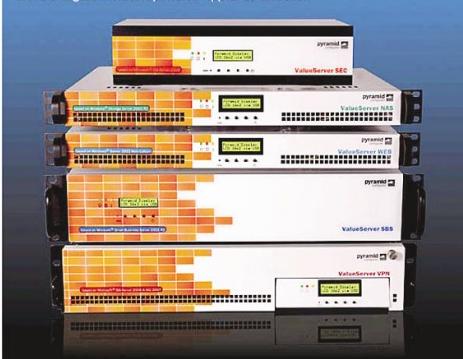
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## PRODUCTS AT WORK

# Sensitive Content Represents A Severe Risk

## Tablus Content Sentinel Helps Columbia River Bank Secure Sensitive Content

by Drew Robb

**MOST COMPANIES TODAY** have a distributed architecture. Instead of all data residing in one large central database, it is spread around in different computers and branches. Even small to midsized enterprises typically consist of dozens of servers, as well as hundreds of laptops and desktops. In some cases, this can amount to multiple terabytes of digital content. Within that vast ocean of data exists pockets of sensitive content—customer files, employee records, Social Security numbers, credit card data, and the like. To truly protect this data, corporate assets, and brand equity, organizations need to first locate their sensitive content across these large repositories.

"In today's content-driven business environment, where information grows by the day, companies are increasingly at risk for the loss or misuse of sensitive or confidential content," says Brian Burke, research manager of security products at IDC. "Whether intentional or accidental, the data breaches gripping newspaper headlines are primarily driven by an enterprise's inability to locate, and consequently protect, sensitive information. Content discovery, or the ability for organizations to locate sensitive, at-risk content, is vital."

But finding that content is far from easy. That is the job of content discovery software tools such as Content Sentinel 3 by Tablus, as used at Columbia River Bank ([www.columbiariverbank.com](http://www.columbiariverbank.com)).

### Columbia River Bank Background

Protection of core assets, then, starts with the discovery of sensitive content. Many large corporations are becoming aware that the first essential step in protecting confi-

dential information is to accurately locate it. That is the purpose of Content Sentinel 3 by Tablus, a tool that is being deployed as a key element in the overall security postures of organizations including Microsoft ([www.microsoft.com](http://www.microsoft.com)), Domino's Pizza, and Columbia River Bank.

"We have all witnessed the negative impact a data breach has on the brand equity of major corporations," says Scott Hamilton, systems administrator at Columbia River Bank.

Headquartered in The Dalles, Ore., Columbia River Bank was founded in 1977. It is now one of the largest community banks in the Northwest, with 24 branches serving 17 markets. In addition to free checking, money market accounts, and other standard offerings, it also provides health insurance, health savings accounts, and investment and retirement services. In one stop, Columbia River Bank provides its local community with the variety of choices normally associated with urban areas.

Such an extensive network of branches contained all manner of confidential customer and financial information. And being in the banking industry, Columbia had to ensure it complied with a wide range of government regulations—state and federal government standards for data protection, as well as frequent FDIC audits.

This prompted Columbia River Bank to evaluate the level of security inside its organization for content loss prevention. The increased use of corporate laptops was of primary concern for the bank, as it was

imperative that sensitive customer details not leave the institution's physical branches.

"The volume of account types at Columbia River Bank means that we frequently search for personal data associated with a specific customer name or account number," says Hamilton. "However, we don't always understand where this information is stored, and we needed to ensure that policies were put into place that prevented employees from storing sensitive data on their laptop computers or saving it onto removable storage devices."

### Looking For A Solution

Columbia River Bank evaluated several types of content loss prevention technologies, with an emphasis on finding a solution that

could quickly and accurately locate and remediate sensitive content dispersed across 350 desktop computers, 80 laptops, and 40 servers on the bank's 22-location network. Accuracy was a primary concern for the organization, as false positives would be a drain on IT resources.

Without Content Sentinel 3, comprehensive content discovery requires the arduous process of pulling data to a central location for analysis, placing a heavy burden on network resources, adding lengthy scan times, and potentially introducing security holes.

"After evaluating a full range of content loss prevention solutions, it was determined that Tablus Content Sentinel best met Columbia River Bank's needs," says Hamilton.

### The Best Fit

Content Sentinel is the only solution with patent-pending ZettaScan Architecture that brings the software to the data rather than bringing the data to the software. As a result, it is the only viable way for large organizations to scan thousands of computers simultaneously, virtually eliminating network impact and cutting scan time from months to hours, while delivering the highest levels of precision, all right out of the box.

Other features of Content Sentinel 3 include hierarchical deployment, which manages policies, scan groups, and results of

content scans. In addition, it has grid-based scanning, which is the fastest and most scalable way to analyze content in a massive data repository. Patent-pending Temporary Agent technology was another primary differentiator in the bank's competitive evaluation.

"The ability to scan each document without adding a permanent client to the machine is a necessity when sorting through large volumes of data," says Hamilton. "In the initial installation of the Content Sentinel, we were able to install the product and begin the scan in approximately 20 minutes. In comparison to the other solutions presented to us, Content Sentinel was definitely a time saver given the magnitude of our account information."

Content Sentinel's light footprint made it easy for the bank to install the product on an existing Windows server within minutes.

"We are able to measure and enforce policies on the protection of that content to better protect against its proliferation," says Hamilton. "In the tests we have conducted, we have not yet seen a single item that passed a scan that should have been flagged to our team. Content Sentinel is an important component of our security posture and will maintain this position as we evolve our IT infrastructure. The ease of deployment and ongoing manageability, combined with the product's ability to scale to a large enterprise environment, makes it an ideal solution for financial institutions such as ours." □



## Tablus Content Sentinel 3

Discovers all of a company's sensitive data stored on laptops, desktops, and servers

"We are able to measure and enforce policies on the protection of that content to better protect against its proliferation," says Scott Hamilton of Columbia River Bank ([www.columbiariverbank.com](http://www.columbiariverbank.com)). "In the tests we have conducted, we have not yet seen a single item that passed a scan that should have been flagged to our team."

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# PCI's Impact On The SME

## It's A Bigger Thump Than You Think

by Bill Hayes, CISSP

• • •

FOLLOWING YEARS of spectacular thefts of credit card numbers, the credit card companies banded together to create a security standard for businesses that accept credit card payments. Known as the PCI DSS (Payment Card Industry Data Security Standard), its 12 security standards are required of every merchant that processes credit cards.

The PCI DSS, or PCI standard for short, dictates the adoption of specific security policies, increased supervision and documentation of critical tasks, secure programming, and the mandatory adoption of security technologies. These technologies include centralized logging and file integrity checking of all PCI resources. Web ecommerce application code must be coded using secure programming practices to avoid specified vulnerabilities.

## What's In Your Auditor?

The PCI Security Standards Council annually certifies PCI auditors known as Qualified Security Assessors, or QSAs. A list of currently certified QSAs can be found on the Council's Web site at [www.pcisecuritystandards.org](http://www.pcisecuritystandards.org). Interestingly enough, this Web page contains the disclaimer, "... the PCI Security Standards Council does not endorse these security solution providers or their business processes or practices."

There have been reports that some QSAs have acted more as not-so-subtle salespersons for a PCI security solution than as security auditors. Dave Howell, senior manager of PCI solutions at RSA, the security division of EMC ([www.emc.com](http://www.emc.com)), suggests a strategy to discern when PCI auditors are more hype than help.

Howell says one of the most important things an SME must determine is whether a conflict of interest exists within a PCI QSA.

"If, for example, the same organization is conducting a pre-assessment, selling products for remediation, and then certifying the final audit, a conflict may well exist," Howell notes.

"This is not always the case, though. Some organizations have clear separation of duties between auditing and sales functions," Howell says. "But, it is something that an SMB—and any organization, for that matter—must be mindful of."

The PCI standard represents the security best practices consensus of the major credit card companies that compose the PCI Security Standards Council. These security standards have developed over time from the individual credit card company security requirements. PCI DSS version 1.1, released in September 2006, is the council's latest effort to better define how credit card data should be protected.

### The PCI Wake-Up Call

"PCI is making compliance much more real to the typical midsized business," says Mike Rothman, president of Security Incite, a security research firm located in Atlanta, Ga.

Rothman notes, "Folks in healthcare and financial services have understood compliance for quite a while, but now pretty much any business that accepts credit cards needs to worry about PCI."

"That's a real change, though many companies continue to be blissfully unaware that they have to do anything," Rothman says. "Although it's not clear how deeply the credit card issuers will enforce PCI, the reality that compliance now applies to almost every business has tremendous impact."

"If there was one key point that organizations need to keep in mind, it's that, while PCI compliance is necessary, companies really must look beyond the PCI audit," notes Dave Howell, senior manager of PCI solutions at RSA, the security division of EMC ([www.emc.com](http://www.emc.com)). According to Howell, companies should also consider how their new security technology and policies can be used to protect other forms of sensitive information.

"PCI DSS is really a core set of best practices for protecting information, and if organizations are leveraging these best practices to protect credit card data, they should also consider how such protections can better secure their business—and enable business growth—more broadly," Howell says.

### Follow The Guidelines

According to Manju Mude, senior compliance analyst at RSA, if companies have evaluated their security policies against industry standards, such as ISO 27001:2005, they have a much greater chance to pass a PCI audit than those who have not followed security best practices.

"By following the guidelines set forth within standards like ISO 17799 and COBIT, companies can create control environments that address IT requirements that span multiple regulations," notes Jane Goh, Check Point ([www.checkpoint.com](http://www.checkpoint.com)) product marketing manager. Goh explains, "By mapping specific regulatory requirements from SOX,

HIPAA, or PCI back to larger information security categories, such as Malicious Code or User Management and other implementation guidelines stated in ISO 17799, companies can simplify compliance with multiple regulations."

### Take A Good Look Under PCI's Hood

The PCI standards are divided in six groups of one to three primary requirements. Each requirement in turn is composed of subcategories of standards needed to meet the primary requirement. It's when you examine the subcategories that the scope and complexity of the PCI standards become apparent.

For instance, the first group, Build And Maintain A Secure Network, governs how network devices, protocols, and servers should be documented, configured, and managed. Detailed documentation of firewall and router configurations with quarterly reviews of router and firewall rule sets are required.

Manju notes that the PCI Requirement 1 mandates updated network diagrams portraying all connections to cardholder data, including any wireless networks. In Requirement 2, each server must be configured according to recognized security baseline configurations by organizations such as SANS or the Center for Internet Security. Servers must have all unnecessary functionality, protocols, and services removed, and they can only have one primary function.

"The reason for this is to minimize risk and exposure," says Mude. "If you house

Contrary to some perceptions, database encryption solutions that are easy to deploy do exist, Howell says. "A key consideration is the technology's ability to protect data in heterogeneous database environments—organizations often own more than a single database platform, so it's important that the technology used to encrypt columns within the database is flexible," Howell notes.

"It's also important that the technology enforces proper separation of duties—i.e., separating the responsibility of security of your most sensitive information from your DBA's [database administrator's] responsibilities to manage user and application access," Howell says.

As a final example of the PCI standard's scope and complexity, the Maintain A Vulnerability Management Program group covers how systems are to be protected through antivirus and antispyware countermeasures, patching, vulnerability identification, and secure software development. Software development change control and prevention of common security program flaws is stressed.

Additional program protection by external code review or an application layer firewall is required to be in place by June 30, 2008.

"Organizations should start to prepare for this now by putting some basic application security processes in place," states Jeff Williams, chairman of the Open Web Application Security Project Foundation ([www.owasp.org](http://www.owasp.org)). OWASP champions secure coding techniques and publishes a list of common Web programming security flaws.

**"Folks in healthcare and financial services have understood compliance for quite a while, but now pretty much any business that accepts credit cards needs to worry about PCI."**

-Security Incite's Mike Rothman

all your credit processing, Web services, accounting, and file storage on a single system, that system is extremely valuable to your business and would expose your customer information in a consolidated manner if it was ever compromised."

### Secure Coding Requirements

In another example of PCI standard's scope and complexity, the next PCI requirement group, Protect Cardholder Data, details how to securely store and transmit cardholder data. Specific instructions regarding encryption methods and encryption key management are included with this group.

"You don't want to go into a code review without putting some work into addressing the OWASP Top 10 first," Williams notes.

"Training developers is a great first step to get organizations moving towards a culture of secure software. Avoid generic courses and go for hands-on training that focuses on the language and platform you use," Williams says.

The PCI standard can serve as a beneficial wake-up call for companies to leverage their existing security technologies. Using existing security standards such as ISO 17799, companies can frame the PCI standards into a comprehensive security strategy that can address multiple regulatory mandates. □

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# Multifunction Open-Source Solutions

## Open Source Comes Of Age

by Sixto Ortiz Jr.

**ANYONE WORKING IN IT** who hasn't heard about open source probably just woke up from a very long nap. The open-source train is rolling full steam ahead, primarily due to open-source applications' reputation for sturdier security and reliability and lack of expensive licensing fees. As open-source solutions gain maturity, concerns over their development model and support options are becoming a thing of the past.

So, as open-source software continues to grow, vendors are offering multipoint open-source solution bundles consisting of hardware, open-source software, consultation, configuration services, and support, making it much easier to purchase, deploy, and maintain these types of products.

### Open Source Today: Gaining Market Share & Adding Value

Most industry watchers would agree that open source is gaining momentum in today's marketplace. Data collected by the Yankee Group's 2007 Global Server Hardware and Server OS Survey certainly reveals that open-source solutions for email, Web presence, and even databases are not going away anytime soon. For example, 23% of the nearly 1,000 IT managers and C-level executives who responded to the survey said they planned to migrate from Microsoft's Exchange Server ([www.microsoft.com](http://www.microsoft.com)) and replace it with a Linux ([www.linux.org](http://www.linux.org)) or open-source messaging platform in the next 12 to 18 months.

Reasons cited for this migration included open-source solutions' reduced costs and complexity, along with difficulties encountered in managing and maintaining Exchange installations. Some survey respondents cited the fact that they encountered more reliability and fewer issues with their open-source messaging platforms than with Exchange.

Britta Serog, vice president of marketing for eRacks Open Source Systems ([eracks.com](http://eracks.com)), a provider of open-source application and hardware systems, says open-source solutions deliver better security, scalability, control, and efficiency to the enterprise. For example, says Serog, license costs, renewals, upgrade costs per user,

complicated licensing schemes, per user service licenses, etc. are all factors that greatly affect scalability and expansion.

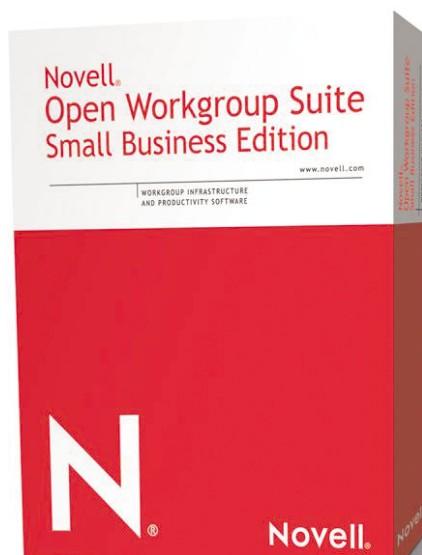
James Rankin, a technology specialist with CDW ([www.cdw.com](http://www.cdw.com)), a well known reseller of technology products and services, says open-source products' open file formats are beneficial because they allow organizations to easily achieve interoperability between applications and retain the ability to read files well into the future.

And, he adds, because open-source applications' source code is open, tailoring an application to fit specific needs is possible. This level of customization is simply not possible with prepackaged applications from specific vendors because the source code that composes those applications is the intellectual property of the vendor and not available for customers to tinker with.

### Multifunction Open Source Hits Its Stride

There are a number of multifunction open-source products in the marketplace today helping organizations do everything from providing messaging services to hosting Web sites. For example, says Serog, eRacks offers server solutions qualified to run properly with just about any open-source operating system chosen by the customer.

The company's eRacks Virtualization Host Servers are powered by one or two dual-core AMD Opteron CPUs running either VMware or Linux's KVM (Kernel-based



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Virtual Machine) to enable customers to run a variety of open-source applications in virtualized environments. Examples of applications include mySQL



The eRacks Virtualization Host Servers ([eracks.com](http://eracks.com)) combine AMD processing power with Linux OSes and open-source applications.

([www.mysql.com](http://www.mysql.com)) or PostgreSQL ([www.postgresql.org](http://www.postgresql.org)) for databases, Zimbra ([www.zimbra.com](http://www.zimbra.com)) for email messaging and collaboration, Jaspersoft Business Intelligence Suite ([www.jaspersoft.com](http://www.jaspersoft.com)), Asterisk IP telephony platform ([www.asterisk.org](http://www.asterisk.org)), and others.

And, adds Serog, the company has forged an alliance with the Libre Group ([www.thelibregroup.com](http://www.thelibregroup.com)) to provide open-source enterprise migration consulting services for its customers.

CDW's Rankin says the company provides open-source products that run the gamut from operating systems to productivity applications to mail servers.

"We are partnered with open-source leaders," adds Rankin, "such as Red Hat, Novell, Xandros, mySQL, and more." And, he points out, by offering a variety of open-source products, CDW customers enjoy flexibility and a variety of options when choosing products.

Examples of open-source products used in business today include the Apache Web server ([www.apache.org](http://www.apache.org)), Zimbra Collaboration Suite 4.5 (for messaging and collaboration), Asterisk IP telephony system, and databases such as mySQL and PostgreSQL.

### Open Source Goes Mission Critical

Everyone is familiar with applications such as the open-source Apache Web server, which is the most widely used Web server today. But other open-source products

providing mission-critical functionality are coming to the forefront and beginning to receive attention from administrators who want to realize the advantages of open source.

For example, technology stalwart HP ([www.hp.com](http://www.hp.com)) offers its OSIP (Open Source Integrated Portfolio), a series of application, hardware platform, and consulting services bundles designed to help customers deploy open source across Linux, Windows, and HP-UX 11i environments. HP's OSIP features the company's OSMS (Open Source Middleware Stacks), which consist of software components (HP

Open Source Building Blocks), blueprints for middleware stacks (HP Open Source Blueprints), and consulting services (HP Open Source Services). In a nutshell, HP is providing prospective customers with tightly integrated bundles of open-source applications, architectures, and the consulting services required to put everything together.

Components of HP's OSIP include operating systems such as Linux, HP-UX, and Windows, and middleware applications such as JBoss Application Server, JEMS (JBoss Enterprise Middleware Suite), or Symas Connexor Directory Services. Hardware platforms include HP's Integrity, ProLiant, BladeSystem, and

StorageWorks. And the deployment and configuration of all of these components is done using HP's global consulting and support services organization, which has over 6,500 worldwide open-source service professionals.

Another example of an open-source multifunction bundle is Novell's Open Workgroup Suite Small Business Edition ([www.novell.com](http://www.novell.com)), a bundle of applications covering the bases from networking services to desktop productivity suites and designed to fit the budgets of smaller businesses. The Suite includes Novell's Open Enterprise Server, GroupWise, SUSE Linux Enterprise Desktop, and OpenOffice.org Novell Edition.

For those businesses that need more, the Novell Open Workgroup Suite adds Novell's ZENworks Suite of system management tools to the bundle.

### Open Source Grows Up

There is no doubt open source is rapidly growing up. The fact that open-source multifunction bundles are increasing in popularity is testimony to the fact that vendors sense an opportunity to offer customers enterprise-class solutions that don't stretch IT budgets to their limits. Open source is poised to provide intense competition against established, proprietary solutions vendors, most notably Microsoft. In the end, no matter how things shake out, one thing's for sure: Customers will win as plenty of choices become available. □

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# New Network Storage Technologies & Products

## A Look At Some Innovative New Offerings That Continue To Fuel Storage Business Growth

by Kurt Marko

• • •

**A PERENNIAL BURDEN** of IT departments large and small is keeping ahead of seemingly unquenchable demands for storage space. The increasing amount of digital content, particularly audio and video media, is obviously fueling storage demand; however, according to Dataquest, the continued automation of business processes by SMEs has required the expansion of robust, reliable storage systems. Concurrently, regulatory compliance has created a need for businesses to archive information for longer periods.

Because most of these automated business processes can't function without access to resources on local networks and the Internet, dedicated DAS is a less suitable solution in comparison to various networked storage platforms. A recent IDC report finds several factors fueling the growth of networked storage by SMEs, most notably an "increased awareness of SMB customers in external storage offerings and benefits of network storage [and the] availability of more affordable solutions enabled by low-cost technologies such as iSCSI and serial ATA (SATA)." While both forms of storage, dedicated SAN and NAS, have been around for years, a number of innovative technologies and products are pushing their functionality, performance, and cost-efficiency to new levels.

### Reducing Your Data Footprint

The ability for companies to acquire vast quantities of storage at decreasing unit prices has resulted in an explosion in what is known as their data footprint. According to Greg Schulz, founder of StorageIO, "While storage capacity has, in fact, become less expensive, as your data footprint expands, more storage capacity and storage management, including software tools and IT staff time, are required to care for and protect your business information." Schulz identifies three primary methods for data footprint reduction: archiving (deleting or offloading old data), compression/compaction (applying lossless compression algorithms to reduce file sizes), and deduplication or single-instance storage (replacing redundant copies of the same information with file pointers or links).

A number of products now provide real-time data compression or deduplication. One notable compression appliance comes from

Storewiz. Its STN-6000 sits in front of any NAS device, transparently applying compression/expansion as data is sent to a storage array. While currently only available for file-based devices, Storewiz plans to add support for Fibre Channel and iSCSI SANs.

Data Domain, another innovator in data reduction technologies, offers a similar product in its Gateway Series appliance. Like Storewiz, its device sits in front of third-party arrays; however, instead of fronting a NAS, Data Domain's product is designed for FC (Fibre Channel) SANs. A key differentiator of Data Domain's products is what the company calls Global Compression technology that combines block-level deduplication, which can eliminate redundant data patterns within a file with algorithm-based compression. This combination results in up to a 20x data reduction over time, reducing the physical capacity required for backup images. Data Domain also integrates these techniques in its DDX Arrays and Appliance Series.

### SANs Get A New Twist

Dedicated SANs have traditionally used special-purpose protocols, notably FC or iSCSI, and while the latter uses TCP/IP and Ethernet for data transport, it still relies on the SCSI protocol to communicate with storage devices. iSCSI essentially tunnels SCSI over an IP network, necessitating special-purpose storage controllers in addition to a standard Ethernet NIC, on each server and storage device in an iSCSI network. Zetera believes it's found a more efficient solution with Z-SAN, which effectively turns each disk into a network node.

Unlike iSCSI, which relies upon Layer-2 Ethernet for transport only, Z-SAN uses native Layer-3 UDP/IP as the storage protocol, using the IP network to create a storage fabric. According to Jeff Greenberg, vice president of international business development at Zetera, Z-SAN is capable of FC-level performance at a much lower cost while being faster and more scalable than iSCSI.

Comprehensive test results from Toigo Partners provide support for these assertions. When analyzing a 4-drive array from Hammer Storage (a Zetera licensee), it found that, "In every category of our standard assessment methodology, the Hammer Array outperforms competitors in its class, including those of IBM and EMC/Dell, and at a fraction

of the price." A note of caution, however: Z-SAN uses a proprietary client driver that is only available on Win2000/XP/2003. Vista, 64-bit Windows, Linux, and Mac OS users are currently out of luck, although Greenberg says these versions are being tested internally.

### Unified Storage & File Virtualization

Unified storage, merging SAN and NAS capabilities, has been a significant market trend for some time, with the field more than a little crowded. But BlueArc is one company consistently mentioned as a high-end leader. Schulz of StorageIO says that BlueArc differentiates itself by incorporating dedicated hardware into its storage gateway to accelerate performance, noting that because unified storage gateways can sit in front of any storage system, they are popular with companies with existing infrastructure.

BlueArc's Titan 2000 series features a modular hardware architecture that is similar to a network router in that it can accommodate separate blades supplying various features. In the Titan's case, these include modules for storage network interfaces (FC,

Ethernet, SCSI), RAID controllers, or NAS heads (essentially a translator between file-level NAS and block-level SAN protocols).

BlueArc also implements another increasingly popular network storage feature, NAS virtualization. Virtualization effectively unifies multiple file systems on any number of NAS systems via a distributed file system and global namespace, such that users see just a single storage pool. According to Schulz, NAS virtualization can be implemented as either a pure software solution or hardware appliance (or module in the case of storage gateways). Leaders in the field include Acopia's ARX appliance ([www.acopia.com](http://www.acopia.com)), Attune Systems' Maestro File Manager ([www.attunesystems.com](http://www.attunesystems.com)), Brocade's family of File Area Network products including Wide Area File Services and StorageX ([www.brocade.com](http://www.brocade.com)), and EMC's Rainfinity Global File Virtualization software and Invista intelligent switch ([www.emc.com](http://www.emc.com)).

Networked storage has been around for well over a decade in the form of dedicated SANs, later expanding to file-based NAS appliances. The storage industry is exhibiting signs of both feature consolidation, with the growing popularity of unified storage gateways, and feature creep, with a raft of innovative new functionality. Such an abundance of choices makes product evaluation more difficult, so Schulz advises IT storage managers to carefully consider their requirements, measuring them against the specific features and limitations of various products, before making such a significant investment. □

## Innovative New Network Storage Products

Storage Appliances	
<b>iStor Networks iS325</b> <a href="http://www.istor.com">www.istor.com</a>	A low-cost iSCSI enclosure designed for SMEs entering the IP SAN market. Features up to eight ports of GbE and one port of 10GbE host connectivity with support for up to 15 SATA devices.
<b>Hammer Storage Z-Box and Z-Rack</b> <a href="http://www.hammer-storage.com">www.hammer-storage.com</a>	Solutions designed to bridge the gap between SCSI DAS and iSCSI SANs; NBOD (networked bunch of disks) products offer the networked benefits of iSCSI SANs, enabling one or more servers to share the storage of single or multiple NBODs.
<b>Zetera NBOD 1100 Series</b> <a href="http://www.zetera.com">www.zetera.com</a>	
Data Footprint Reduction	
<b>Data Domain Appliance Series</b> <a href="http://www.datadomain.com">www.datadomain.com</a>	Combines a scalable, 3U storage enclosure of up to 31TB of raw capacity with data reduction and disaster recovery features.
<b>Data Domain Gateway Series</b>	Extends the benefits of Data Domain deduplication technology to third-party external storage systems, providing massive data reduction via inline deduplication and global compression.
<b>Storewiz STN-6000</b> <a href="http://www.storewiz.com">www.storewiz.com</a>	Provides on-the-fly lossless and fully transparent compression and an increase in available capacity of 300% or more.
Unified Storage Gateway	
<b>BlueArc Titan</b> <a href="http://www.bluearc.com">www.bluearc.com</a>	Consolidates and manages up to 512TB of data in a single storage pool, supporting 5Gbps throughput performance at the entry level or 10Gbps of data throughput with the high-performance configuration.

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## WHAT'S HAPPENING

# Is Your Data Center Earthquake Safe?

## WorkSafe Offers Seismic Protection

by Julie Sartain

HAVE YOU EVER WONDERED what would happen to your data center if your area was struck by an earthquake? According to the U.S. Geological Survey, 26 of the largest earthquakes on record with Richter Scales measuring 7.3 to 9.2 occurred in the United States between 1811 and 2002. There were 625 earthquakes in the United States during the last week of July. Most are less than 3.5 on the Richter Scale and go undetected by humans, but anything 6.0 and above causes damage. Is your data center safe?

WorkSafe Technologies ([www.worksafe.com](http://www.worksafe.com)) is a leading authority in seismic protection. According to Don Hubbard, company president, WorkSafe Technologies' ISO-Base seismic isolation technology is the most effective way to protect mission-critical and expensive electronic equipment in the event of an earthquake.

### The Technology & How It Works

"We use a patented 'geometry-specific' isolation bearing to decouple the equipment (or any structure) from damaging ground motions. The bearing is 100% gravity restoring, which means that after the shaking stops, it will smoothly return to its original location. The bearing also works as a white-noise filter, virtually eliminating the transfer

of seismic vibrations into sensitive components. If all other peripheral systems (such as power) stay up and running, the isolated equipment can and will continue to operate and process data right on through a major earthquake," says Hubbard.

According to Vaughan Mason, a master distributor at WorkSafe, The Boeing Company ([www.boeing.com](http://www.boeing.com)) was one of the first three large companies in the Pacific Northwest to standardize the ISO-Base Seismic Platform as its best practices for seismic mitigation. "Boeing committed to a sizable three-year budget to, essentially, retrofit their two largest data centers," says Mason. "The project was about one year old when the Seattle Nisqually earthquake hit. At that time, approximately 400 server cabinets had been placed on ISO-Base Platforms and were located at the Bellevue Computer Services Center and the Kent Space Center."

"The platforms performed exactly as designed, and no servers were damaged, and no servers on the platforms experienced any downtime," continues Mason. "In contrast, one of Boeing's smaller data centers, at Boeing field, had several server cabinets not on ISO-Base Platforms topple over and were damaged."

### Target Audience: Who & Where?

Susana Acosta, marketing director at WorkSafe, says the ISO-Base Platforms are currently used in data centers and computer rooms to secure mainframes, LAN racks, electronics enclosures, and other critical

equipment. They are also used in clean rooms and laboratories for protecting sensitive tools and instrumentation and in manufacturing plants to protect heavy machinery, as well as in hot and cold rooms and all types of industrial supply locations.

These platforms can be easily installed even when equipment is live and operational—no drilling or anchoring is required, notes Acosta. They have been extensively tested and exceed UBC/IBC Seismic Zone 4 code requirements (Bellcore NEBS). They are also used in many different seismic-prone countries around the world.

For example, according to WorkSafe, Japan now has 1,000 users and more than



25,000 platforms installed. "We can say that ISO-Base has quickly become the defacto standard in Japan for seismic protection of IT racks and cabinets," adds Hubbard. "ISO-Base has protected the IT racks in all cases, even where some of our users were right above the epicenter, such as the Sanyo Electronics factory during the Niigata M7 quake in October of 2004."

### Looking Back & Moving Forward

The creative vision of Don Hubbard combined with the entrepreneurial expertise of CEO Gil Moreno made it possible to found WorkSafe and to engineer its first seismic fastening products almost two decades ago. "We came up with ISO-Base Platforms while doing old-school seismic bracing," says Hubbard. "We realized the need to reduce the stress on the equipment instead of adding stress to it with traditional bracing and bolting methods. Well into our second

decade, we are constantly striving to increase our expertise by developing products to protect our clients' businesses. The ultimate goal is to keep mission-critical equipment running as smoothly as possible and to ensure a rapid and easy operational recovery in the event of a seismic disturbance."

According to Acosta, last August WorkSafe was selected by Cray and the U.S. Department of Energy Office of Science to provide its patented ISO-Base seismic isolation technology to protect the world's fastest supercomputer from seismic shock and vibration. In addition, last month, the University of Alaska Fairbanks base-isolated its first server cabinets in its central data center, home to the Arctic Region Supercomputing Center. The data center in Fairbanks is the University's central IT hub for communication and data storage, housing around 100 server cabinets, many of which are supercomputers.

"Our innovations in seismic mitigation have been well received, not only in domestic seismic regions but also in seismic hot spots around the world," says Acosta. "We have an established presence throughout the United States and Canada, as well as Japan, New Zealand, Taiwan, Turkey, and Mexico, with plans to expand into Western Europe, Central and South America, and Southeast Asia in the near future."

WorkSafe's ISO-Base Platform has been approved by the State of Washington and given the title of "sole source provider." In addition, the company received the Award of Excellence from the 2004 National Earthquake Conference in the Mitigation category. WorkSafe Technologies products are also the only products to pass the stringent Canadian Government Standards Testing at the University of British Columbia, and the Japan Quality Assurance Organization has certified the ISO-Base Seismic Isolation Platforms for seismic requirements, which means they passed Japan's rigorous quality and seismic performance testing. ■

## THREE QUESTIONS

# A Step Up In Application Availability

## Marathon Offers SMEs "Infinite Availability" For Windows Applications

by Corey Russman

**FOUNDED IN 1993**, Marathon Technologies ([www.marathontechnologies.com](http://www.marathontechnologies.com)) is among the fastest-growing companies in today's application availability market. The company's everRun product family represents a breakthrough in application availability, moving the market past high availability and continuous availability solutions to what Marathon calls "infinite availability."

Marathon CEO Gary Phillips has more than 20 years of experience in senior management for high technology firms, with experience in sales, marketing, professional services, and general management. Phillips says Marathon's everRun product family provides automated application availability for Windows platforms for any business that depends on its applications being always available.

### ■ What are the biggest IT-related issues facing today's small to midsized enterprises?

**Phillips:** About two-thirds of our customers are midsized or smaller enterprises. And what we see is that, like their larger brethren, midsized and smaller enterprises are grappling with how to get more from their IT dollars and how they can more clearly link their IT initiatives with the business priorities.

Virtualization offers a lot of potential to help them with these challenges: better utilization of their existing hardware, lower capital and operating expenses, and greater flexibility to meet business needs. But virtualization hasn't taken off with midsized and small businesses. Why? With the number of servers typically in these enterprises, and the cost and complexity of today's leading virtualization software, server consolidation alone doesn't pencil out.

We agree with IDC analyst John Humphreys that system availability and disaster recovery for business resiliency are key reasons why mid-sized and smaller organizations will deploy virtualization software. But that won't happen until these enterprises are convinced that they can deploy virtualization software that really is cost-effective, easy to install, and easy to maintain.

To meet this challenge, we are working with XenSource on what we refer to as our v-Available initiative. We are integrating the XenEnterprise hypervisor and our everRun software to deliver a combination of virtualization price/performance, ease of use, and fault-tolerant class availability that will be attractive to midsized and smaller companies. There will be two versions: one that will include the XenEnterprise hypervisor and our everRun software as a turnkey package and a second version for existing XenEnterprise customers who want to add our everRun functionality.

### ■ What should Processor readers know about your company's products?

**Phillips:** There are three things we think data center and IT managers should know about our everRun software.

First, we have developed what we call our ComputeThru technology that can keep essential applications running (and users connected) through both network and disk I/O failures. That means enterprises will rarely, if ever, experience lost data, lost revenue, or lost productivity due to common system or network faults or failures. Some of the typical

applications we protect include Microsoft Exchange, SQL, and SharePoint, as well as vertical applications in regulated industries such as process manufacturing, healthcare, gaming, financial services, and government.

Second, everRun fits in seamlessly with an enterprise's existing infrastructure. It works with standard off-the-shelf x86 Intel and AMD servers, standard Windows Server 2003, and standard applications. Enterprises don't have to modify their applications in any way.

Third, everRun has embedded policy management and fault management, so it automatically handles all network and disk I/O failures. everRun really allows enterprises to just set it and forget it.

To sum up, with our everRun software, enterprises of all sizes now have a simpler, more cost-effective way to keep their users continuously connected to their essential Windows applications.

### ■ What makes your company unique?

**Phillips:** So many technology companies talk about how reliable and how easy their software is to set up, use, and maintain. Jaded IT professionals know better. What's unique about our software is that it really delivers as advertised. Our customers evaluate and buy their first licenses based on the recommendation from our partners. But they buy the follow-on licenses because, in their own words, 'it just works and works and works without us having to do hardly anything.'

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